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A Brilliant Enterprise.

THE plans of the new United States Rubber Co. as outlined in their articles of incorporation, and understood more fully by those who have watched the recent movements of the promoters, form the most brilliant scheme of modern times to control all the factors in an important branch of industry. Whether or not complete success is to be achieved, the conception of the plan alone is sufficient to stamp its author as unusually gifted with originality, daring and ability as an organizer. The control of the Amazonian rubber trade long has been a tempting prize for which great speculators have striven, and the obstacles to be overcome are not so numerous as may at first appear.

The most far-reaching "corner" in most natural products is speedily undermined by the development of new sources of supplies, but Pará rubber grows so far in only one section of the globe, and that has now but one practicable means of approach—the Amazon river. Whoever can control the means of transportation on that stream has the key to the whole situation, compared with which any scheme merely to buy and hold the rubber coming down to Pará, as attempted more than once by the dashing and ambitious Baron du Gondoriz, is puerile and insignificant. The Brazilian governments are too weak, and the Brazilian people too far lacking in appreciation of their resources, to protect themselves against outside control of the rubber trade and the means of transportation on their own great river when undertaken with the aid of limitless capital and great financial skill, to say nothing of the moral support of a stronger government.

It is not impossible for a solidly-organized commercial company, either here or in Europe, to gain absolute control of the cream of the rubber forests, over an area great enough to constitute an empire. The land has practically no value. It is free to any invader. Only organized modern business methods are necessary to insure economical gathering of a commodity which grows without cultivation and which can be made to yield richer returns than any gold-fields yet opened to the world. The steamboat lines on the Amazon, which the United States Rubber Co. are now seeking to control, hold exclusive franchises and the promise of subsidies which the local governments, impecunious as they are, doubtless would prefer to pay in grants of rubber-lands rather than in hard cash. Embraced in the scheme also is a line of steamers flying the American flag, making it possible to transport directly, under one management, from far up the Amazon to New York or Boston, the supplies of crude rubber which form the most valuable cargoes afloat.

In the same connection can be established American banking facilities in Brazil, the lack of which always has placed our trade with that country at a disadvantage as compared with our competitors in Europe. It may be noted, also, that the controlling spirits in this new rubber combination helped to bring about the "reciprocity" arrangement whereby Brazil consented to admit American hardware and machinery and other wares under a cheaper tariff than like products from any other country, with a

view to extending our exports in that direction and creating cargoes for the return trips of vessels carrying rubber this way. If, to this plan, is added the control of well-equipped factories for the manufacture of rubber-goods and control of other raw materials used in that manufacture, the scheme becomes broad enough to challenge the admiration of the whole commercial world.

Of course the proof of the pudding is in the eating. Even the fifty years named as the life of the new corporation may not be sufficient for the consummation of their plans. Their scheme has been too carefully matured, however, and has been the result of study for too long a time, on the part of some of the ablest minds on this continent, to justify hasty predictions that nothing can come of it. Before Gondoriz visited New York to seek backing for his own "corner" the plan was developing and his collapse hastened the time for its unfolding.

Meanwhile there is much idle capital in the world, and the construction of railroads in various parts of South America is occupying the attention of great engineers. The readers of this journal may recall a series of articles printed two years ago pointing out means whereby rail communication with the rubber forests is possible, and the full success of the rubber combine doubtless would stimulate efforts to utilize these plans. Thus while Brazilian rubber may be "cornered" for a period, through a monopoly on the Amazon, the world need not always depend upon natural channels of transportation to the rubber-fields.

IT is now reported from Pará that the Baron de Gondoriz is at work forming a company of somewhat smaller proportions than the Cia Mercantil do Pará, the mammoth concern of last year, with which it will be remembered the Baron was connected. The Baron is irrepressible and he has friends in New York who will be glad to see him on the road to success. Criminal charges have been preferred against him and his directors in the old company for malfeasance in office, to which the Baron has replied at great length in the Pará newspapers. The impression in New York is that the charges arise from some dissatisfied stockholder whose losses have led him to take this means of satisfying his feelings.

THE improvement of roads and the increasing sales of bicycles go hand in hand. It is interesting to note that Col. Albert A. Pope, an enthusiastic supporter of the movement for good roads and the founder of the Department of Road Construction in the Massachusetts Institute of Technology, has offered $10,000 worth of bicycles as prizes to boys and young men in the schools of the country for articles on any phase of the subject "Good roads." The interest of the rubber-man in this popular educational movement grows out of the great and growing consumption of rubber in the manufacture of bicycles.

THE Brazilian Minister at Washington, Senhor Salvador de Mendonça, is authority for the statement that aside from the appropriation of $300,000 by the Federal Government of Brazil for the World's Fair exhibit, different States in that country have made liberal appropriations and appointed committees to take charge of their State exhibits. It is probable, he states, that a profuse exhibit of staple articles of export will be made, including rubber.

IT may be mentioned as an evidence of the appreciation bestowed upon THE INDIA RUBBER WORLD abroad that a set of the bound volumes of this journal has been placed in the library of the British Patent-Office upon the order of the librarian, Mr. Herbert John Allison, who reports that frequent inquiries for it have been made by visitors to the library.

The Wealthy Rubber Trust.

MOST of the directors of the United States Rubber Co. represent aggregations of capital separate from their individual wealth. J. Edward Simmons will serve as an example. Associated with him are Cornelius N. Bliss, dry-goods merchant; Charles S. Smith, president of the Chamber of Commerce and retired merchant; John H. Inman, railway magnate and dealer in cotton on a vast scale, and R. T. Wilson, banker. Therefore the names of the directors are given with the estimates of their own fortunes and the capital they directly represent:

	Individual wealth.	Capital represented.
William L. Trenholm, (President) president of the American Surety Co., first vice-president of the State Trust Co., director of the Mechanics' National Bank; Comptroller of the Currency in the Cleveland administration	$100,000	$8,000,000
John I. Waterbury, (Secretary) vice-president of the Manhattan Trust Co	300,000	12,000,000
J. Edward Simmons, president of the Fourth National Bank, member of the Clearing House committee; ex-president of the New York Stock Exchange.	1,500,000	15,000,000
John D. Townsend, president Knickerbocker Trust Co	500,000	5,000,000
Henry Steers, president Eleventh Ward National Bank, extensive owner of real estate	1,500,000	
William Barbour, of Barbour Bros., linen-thread manufacturers, Paterson, N. J.	1,500,000	3,000,000
Charles E. Thayer, dealer in dye-woods, Boston	1,000,000	
Thomas F. Patterson, of Sawyer, Manning & Co., manufacturers of woolen goods, Boston	500,000	2,000,000
Robert D. Evans; president American Rubber Co., Boston	1,000,000	
Henry L. Hotchkiss, president of L. Candee Rubber Co., manufacturers of rubber goods, New Haven, Conn	1,000,000	4,000,000
Charles L. Johnson, treasurer L. Candee Rubber Co.	200,000	
W. C. Martin, president New Jersey Rubber-Shoe Co., New Brunswick, N. J., executor of the estate of the late Christopher Meyer	3,000,000	
James Deshler, secretary of the New Jersey Rubber Shoe Co	Nominal.	
Total	$12,100,000	$40,000,000

New Publications.

"THE ELECTRICIAN" ELECTRICAL TRADES DIRECTORY AND Handbook for 1892. London: "The Electrician" Printing and Publishing Co., Limited. 1892. [8vo, boards, 768-cxxxi p., 7 shillings 6 pence, postage extra.]

THIS is the tenth annual issue of a well-known book of reference, each edition of which has increased the obligations of the electrician profession and trades to the publishers. In respect to the directory of electricians and electrical firms in Great Britain, the Colonies and foreign countries, it is stated that no name has been included about which any doubt existed, so careful have the compilers been to make the lists trustworthy. Much attention has been given to the standing of electrical companies, particularly incorporated concerns, on account of which, and other new features, this volume contains a hundred more pages than its predecessors. In the biographical section much information is given respecting electricians of note, twenty-eight of the sketches being accompanied by portraits.

Need of Data on Wear of Rubber.

[FROM LONDON "INVENTION."]

WITHOUT entering the contest between rival claimants to the honor of discovering the vulcanization of rubber it is interesting to record the story of Nathaniel Hayward's first struggle after the solution of this problem. In default of scientific knowledge he was forced to trust to luck. His first compound was a curious mixture of ingredients, which by merest chance contained a piece of roll sulphur. The product surpassed his highest anticipations. It was firm, elastic, and no longer became sticky when exposed to the heat of the sun But, as it happened, he had forgotten a portion of his experimental receipt; the sulphur was omitted, and the second batch was a failure. A dream, however, prompted his treacherous memory and restored the precious secret. Such is the romance, and whether true or not it illustrates the character of the large part of the work which has been done during the past fifty years in the development of the rubber industry.

The experimenters have not been men of science, and they have not followed scientific methods. They have, however, been men of sound common sense, possessed of a fair amount of general information, which they have known how to apply advantageously, and they have accomplished really wonderful things. Yet the progress in rubber-manufacture has been due in a large measure to a series of clever guesses. Even to-day there is but a single rubber-manufacturer in America who employs a chemist. While there is a certain uniformity in the processes of manufacture, there is also a most astonishing variation in the details of treatment and in the receipts in vogue in the different factories for the production of what purport to be similar grades of rubber goods. These special processes are in the majority of cases guarded with extreme jealousy as "trade secrets." The possession of "secrets" in most branches of manufacture is a specious pretence, a piece of ludicrous folly, but the rubber business has not yet emerged from its middle ages of cryptographic mysteries into its period of scientific development. There is not in existence a treatise on rubber-manufacture which gives formulæ for compounds and descriptions of processes, by which goods can be manufactured equal to those now on the market, and the writing of such a book at present would be an impossibility. Even the best superintendents of rubber factories merely know those processes with which they have chanced to come in contact. They still remain in ignorance of a mass of information which can be obtained only by actual experience in all the leading factories in the country. The chemistry of rubber has been very imperfectly studied, and its physical properties have been made the subject of thorough research by only one American physicist, and even he has done scarcely more than indicate a number of wonderful characteristics, each of which is deserving of special investigation.

On the practical side the consumer of rubber is continually the victim of the tradesmen's desire to sell. If he finds an article that serves his purpose well he naturally persists in the use of that brand, but he cannot be sure that it is the best that could be found. The fact is, a very little difference in the curing temperature, or in the amounts of the various adulterants, affects the value of the rubber for specific uses, rendering it good for some and bad for others. In the case of rubber hose-connections for steam-heating apparatus, for instance, the purer the rubber the greater is its tendency to become spongy. Sometimes the "lining" will sponge up and almost close the pipe before the "friction" and "cover" are affected. The introduction of certain adulterants will entirely remove this trouble and give the hose a long life, while other adulterants will cause the rubber, under the influence of the steam, to lose its elasticity, grow hard and crack. The usual tests of a sample will not show how the hose will behave under long-continued use. Nothing short of a comparative study of the effects of service upon rubbers of different manufacture can determine such a question.

So of air-brake hose; it is the one item of brake equipment on which intelligent judgment cannot be used. It would be worth a great deal of money to buyers of air-brake hose to know how the best could be selected from among the samples offered; but the makers themselves could not furnish tests that would be exclusive. So all that one can do is to buy of the maker who gives him good satisfaction and has a valuable reputation. It would, of course, be well to know the compounds and the treatment employed in each case, and in time, when the rubber-manufacture has become a science in the sense that the metallurgy of iron and steel is a science, this will be known to the benefit of both consumers and manufacturers, but at present data as to the wear of rubber in its various applications must of necessity refer simply to the manufacturers' brands, although the virtues of some adulterants can be ascertained definitely.

Considering the innumerable uses of rubber in the mechanical arts it would certainly seem a wise step for some of our engineering societies to appoint committees for the purpose of collecting data regarding the wear, and, as far as possible, the causes and conditions of failure, as well as to seek by experiments reliable rules for testing the value of some of the rubber articles of most general use, such as belting, hose, packing and the like. A contribution of immense importance might thus be made to one of the greatest of our growing industries.

Cleaning Rubber Blankets.

[FROM "THE LITHOGRAPHIC ART JOURNAL."]

THE use of turpentine for removing ink, fat, oil, and colors from the rubber blankets has spread of late to such an extent that a few remarks on the subject may not be amiss. As little turpentine as possible should be employed when its use seems advisable, and it is necessary to be careful that the cleaned blankets are thoroughly dry before they are used again. This is a very important point, as otherwise the surface of the rubber would be softened and the impression of the cylinder would spoil the blanket by cracking or corrugating the surface. The best way is to clean the blankets in the evening, after the day's work is over; this will allow plenty of time for the drying of the turpentine and the return of the blankets to their natural condition, which would not be the case if the cleaning were done during the day, when the blankets may be required any moment.

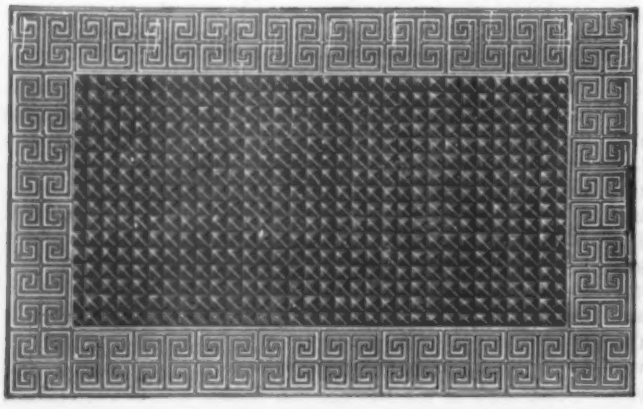
As a very effective substitute for turpentine, spirits of hartshorn is highly recommended. It cleans more quickly and thoroughly, and offers less danger of spoiling the blankets. The spirits of hartshorn should be diluted until it has a strength of about 6 or 9 degrees; it can easily be obtained of a strength of 18 degrees, and be diluted by adding one or two equal parts of water. After cleaning the blankets they should be dried with the use of pulverized magnesia or chalk. If treated in this way, the spirits of hartshorn dries very quick—much quicker than turpentine—and nothing prevents its use without the slightest danger of deterioration.

THE store of the Metropolitan Rubber Co., No. 676 Broadway, New York, was destroyed by fire on the evening of April 11, causing a loss to the company of its stock of rubber goods. The company had occupied the store but a few weeks. It was handsomely fitted up, but will probably be renovated at once.

NEW GOODS IN THE MARKET.

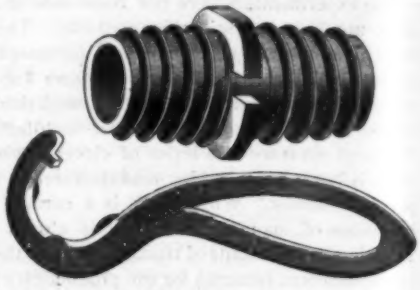
RUBBER mats, matting and stair-treads are intended for wear. They generally get pretty hard usage, and too much stress cannot be laid upon the importance of buying those well made. The constant wear and tear upon goods of this kind will, if the material used in their manufacture be of cheap and inferior quality, soon cause them to become hard and brittle, and in a short time crumble to pieces. Upon the other hand, first-class, properly and carefully made goods, in the manufacture of which only the best of ingredients are combined, are well-nigh indestructible, and afford the best possible protection for flooring, be it of iron, stone or wood. For a long number of years the New York Belting and Packing Co. (Limited) have been before the public as makers of a superior line of rubber mats, matting and stair-treads. The "Pyramid" rubber matting and "N. P. M." rubber mats with pyramid center, are recent products of the company, and seem destined to meet with even more favor than the celebrated corrugated and perforated mats and matting made by them. The Pyramid matting, in addition to the good qualities of the corrugated product, has, furthermore, the advantage of being more ornamental, and at the same time more easily kept clean. It has also been found very economical for cutting into stair-treads, the form of the pattern permitting this to be done either across or lengthwise with the roll. This material can be furnished as wide as thirty inches and twenty feet long. The "N. P. M." mat, with pyramid center, presents an extremely artistic appearance, and is a great favorite for use in vestibules of private dwellings. All goods made by the company have their name stamped upon them. Rubber mats, matting and stair-treads are noiseless when trodden upon, and are unequalled for safety, economy and cleanliness. Immense quantities of these goods made by the New York Belting and Packing Co. (Limited) are used in private dwellings, public buildings, apartment-houses, office buildings, manufactories, club-houses, cafés, railroad-depots, theaters and other places of amusement, in situations where there is considerable passing to and fro. The mats and treads are of special value for iron and stone stairways, in safety to life and limb. Where exposed to ice and snow they are a great safeguard.

PYRAMID RUBBER MATTING.



Robinson's Hose-Mender and Wrench.

A PRACTICAL article for use in hose-mending is illustrated in the accompanying engraving, being Robinson's Improved Hose-Mender and Wrench. It is provided with right and left-hand threads and, it is stated, is easily and quickly applied by means of the wrench, which prevents coming out or leakage. A half-dozen menders and one wrench are packed together in a box, the whole selling for 25 cents. Manufactured by the Cleveland (Ohio) Foundry Co.



Waterproof Goods for Summer.

A MACKINTOSH for spring and summer wear is a far harder garment to make satisfactorily than is the regular heavy winter garment. In the first place it must fit well and yet give a chance for ventilation. It must, of course, be thoroughly waterproof and yet there should not be such a body of rubber between the textures as to make it a burden in the warm spring rains. A sleeveless garment of light-weight cloth with a thin coating of pure rubber has been found to answer the purpose best. Such a garment is the "New York," a cut of which is shown herewith. This is made chiefly in single textures, but may be a double texture garment and still be very light and comfortable. It is so made that the wearer can easily get at the pocket in the dress without unbuttoning the garment. In price it runs all the way from $3 to $18. Made by the Reading Rubber Manufacturing Co., No. 67 Chauncey street, Boston, Mass.

WATERPROOF FOR SUMMER.

Two Popular New Styles of Rubber Shoes.

WHAT is known as the "Normandie" is a new shoe that has many points of excellence. It is high cut, as the popular fash-

ion is to-day; the upper is of jersey cloth, while the lining is of black fleece. Special attention has been paid in making this shoe to have it superior in every way, and it is one of the best-fitting rubber shoes that has ever been put on the market. It is similar to the well-known "Blizzard" shoe which is manufactured by the same company. These shoes already, by their excellent finish and beautiful shape, have become very popular and have substantially added to the already excellent reputation of the Wales Goodyear Rubber Co., Boston, Mass., who are the manufacturers. An extra high-cut shoe that is specially adapted for wear in snowy weather, also made by the same firm, is known as the "Niobe." This is made with a jersey upper and with an elegant black fleece lining. It is a ten-button shoe and this season will undoubtedly be very popular. The sole and rubber parts of the shoe are made of the best stock and bear the guarantee of the manufacturers.

"NORMANDIE."

"NIOBE."

The "Perfection" Bottle-Stopper.

ALL mineral waters, wines and malt liquids, when exposed to the air without corkage, soon lose their sparkle and become dead. The drawback to the successful and satisfactory sale of many lines of liquid goods has often been the lack of the right kind of stopper for the bottles containing them. In every family, also, and especially in the sick-room, much inconvenience has been suffered through the lack of stoppers which would preserve in the proper condition liquids needed for frequent use. The "Perfection" Bottle-Stopper, of which two engravings are shown on this page, has been designed with a view to meeting many of the difficulties here pointed out. The manner in which the device adapts itself to the mouth of the bottle and becomes an effective stopper will readily be inferred from the illustrations, the first of which shows the stopper ready for insertion in the bottle and the second when in use. It is easily operated. By pressing the piston down the bulb is elongated, thereby lessening the size. When the stopper is inserted in the neck of the bottle the pressure on the piston is removed and it at once adjusts itself to the shape and size of the bottle. To remove the stopper press the piston as before and lift it out. The stopper is described as made from pure rubber with celluloid and aluminum trimmings. The manufacturers state that they are making the device in two sizes, but will shortly increase the number to six, so that they will then be able to fit anything from a two-ounce vial to a five-gallon demijohn. Manufactured by the Perfection Bottle-Stopper Co., Chicago, Ill.

READY FOR INSERTION.

IN POSITION IN BOTTLE.

Adjustable and Extensible Rubber Connection.

MUCH of the cost and labor involved in connecting the flush-pipe to the horn of the water-closet by the hard and fast method generally adopted can be done away with by the use of a new adjustable extension rubber connection recently placed upon the market. By the illustrations published herewith plumbers and architects can readily see the simplicity of this new connection. Figure 1 shows the rubber elbow with the brass coupling (nickel-plated when desired), the nut of which is attached to the closet. The threaded brass cap of the coupling screws over the threaded rubber elbow, making a joint which is strong enough, tight, and capable of extension from three inches to six inches, so if the closet is to be set anywhere from three to six inches from the supply pipe, this fitting permits the connection to be made easily, cheaply and quickly. The upper end of the elbow can be had with or without the threaded brass nipple or cap. If not used the rubber is simply forced over the end of the flush-pipe and wired. Figure 2 shows the elbow without the brass nipple. If the brass nipple is used, it is screwed down over the rubber after the flush pipe is inserted, making a very firm and water-tight joint. As the rubber and cap are slightly tapering it will be seen that a very tight joint can be made. Figure 3 shows the extensible straight connection for use where the supply-pipe comes down back of the marble or wall. Figure 4 shows the elbow in place on the horn of the closet, showing the rubber entering the horn beyond the coupling joint, making a continuous waterway through the rubber directly from the flush pipe into the bowl of the closet, so that there would be no leakage even were the coupling joint not perfectly tight. The chief advantage which this connection possesses is its extensibility. It frequently happens that plumbing is roughed in before the closet is decided upon, and the soil-pipe connection will be cut two or three inches. This connection permits these irregularities to be overcome without expense. Then, too, by the settling of the floors the closet bowl is frequently broken when a rigid brass coupling is used, a loss which this connection avoids. Manufactured by the Standard Brass Works, Cincinnati, Ohio, who offer to send catalogues containing further information.

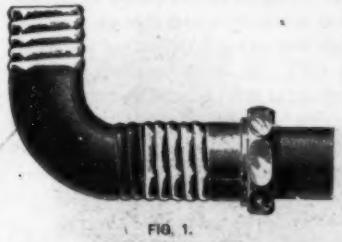


FIG. 1.

FIG. 2.

FIG. 3.

FIG. 4.

An Overshoe Lock.

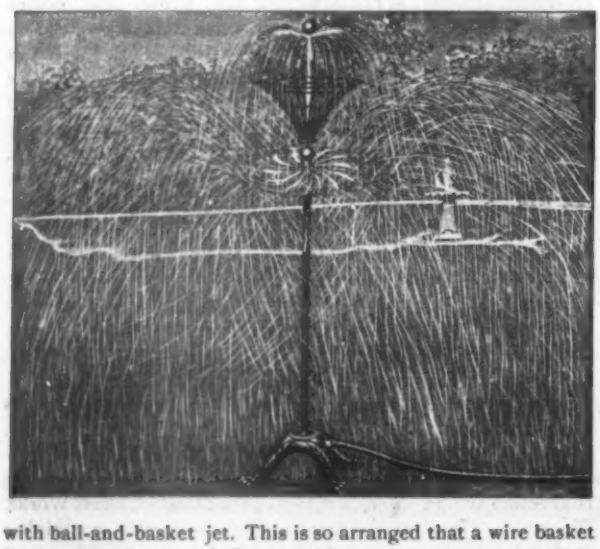
A PATENT has been issued recently to Joseph H. Morison, of Centralia, Kan., for a profanity-saving device to prevent rubbers and overshoes from coming off in the mud. Those who have vainly struggled against this annoyance by wearing overshoes

uncomfortably small are now enabled by this invention to wear a large shoe in perfect security. It consists of a pair of pivoted opposite lateral clamps, adapted to hug the upper heel-end portion of the overshoe, and jointed together at their inner

ends by a vertical hinge-pin passing through an intermediate or center-plate firmly secured to the overshoe. The center-plate has a backwardly protruding lug, and a fulcrum pin passes through this and two side-arms of a clamping lever. The side-arms of this lever are practically cams, and as the lever is pressed downward against the heel of the shoe the arms press the clamping wings inward, making the heel-end portion of the overshoe grip the under shoe. One motion of the hand or foot locks or unlocks this device, which does away with the necessity for strings and straps. The patentee offers for sale shop-right and royalty.

The Jones Lawn-Sprinkler.

A GREAT variety of appliances for graceful and attractive lawn-sprinklers have been brought out within the last few years. In most of these the thought has been to make a graceful fountain and for that purpose to add some little mechanical contrivance that would attract the eye. An invention that is more and more being used in connection with lawn-sprinkling and that gives a beautiful effect is the Jones Lawn-Sprinkler,



with ball-and-basket jet. This is so arranged that a wire basket is placed in the top of the sprinkler and in this receptacle is placed a ball that looks to be solid silver. The jet of water passing up through the center of the basket keeps this ball suspended some inches above it, and holds it there as long as the jet plays. This may be attached to any one of the sprinklers of the Jones patent. The sprinklers themselves are made with four, six and eight arms and with or without the jet form a most beautiful and attractive fountain. Manufactured by M. D. Jones, No. 76 Washington street, Boston.

Two New "Bell Brand" Boots.

AN ideal finished short boot that is one of the well-known "Bell" brand is shown in the first of the accompanying engravings. This is made of heavy stock and is either wool or friction lined. It is made in men's, boys' and youths' sizes, and in "F" and "W" widths. The fact that this is appreciated by the trade and that it is a ready seller is perhaps indicated as well by the following letter as in any other way. Manufactured by the Boston Rubber Co., No. 9 Otis street, Boston, who quote the following letter received by them from the Columbus (Ohio) Rubber Co:

SHORT BOOT.

"In placing our order with you for 'Bell' boots, to be delivered after April 1, as per specifications herewith enclosed, we desire to say that we have both retailed and jobbed these goods since December, 1889, and have never had a single complaint. We like them very much, and consider the 'Bell' the best boot we ever sold.

"COLUMBUS RUBBER CO."

PEBBLE-LEG BOOT.

Another boot manufactured by the same house is what is known as the "pebble-leg" boot. This is made of very light stock, with a handsomely pebbled leg, or it may be made in a dull finish. It is made in all the sizes and usual widths, the leg, however, is much longer than the ordinary rubber boot. Congdon & Aylsworth, well-known jobbers in Providence, R. I., endorse this boot very highly. To quote their exact words they say: "Our sales for the season just closed have been enormous, with scarcely a complaint, an unparalleled experience in handling rubber foot wear for over forty years."

Useful in all Seasons.

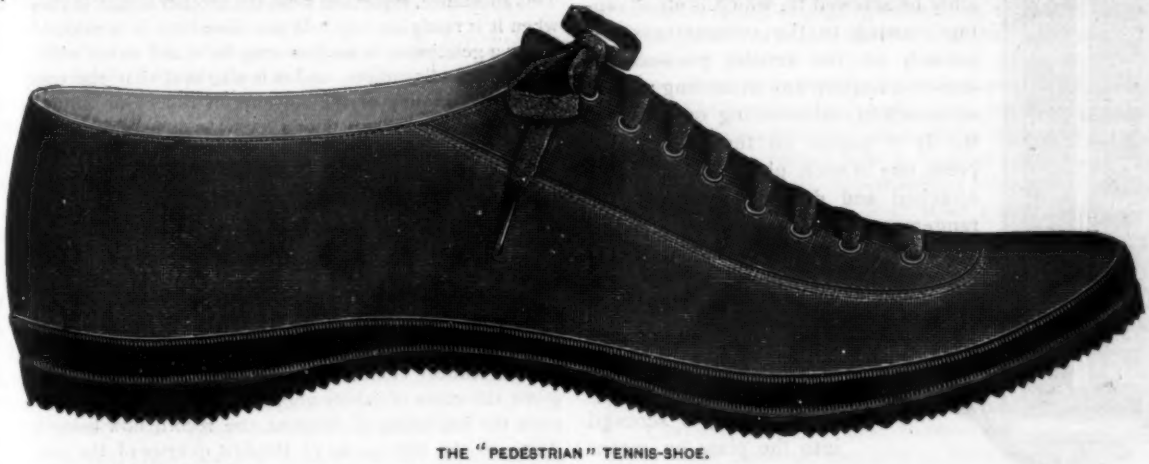
MANY inventions that are intrinsically valuable are commercially at a disadvantage because salable only at certain seasons. This is not the case with the little article pictured by the accompanying cut, for its functions are twofold. One of its uses comes

in play in winter and the other in summer. Hence it is liked by the merchants, who have a dread of dead stock. They sell it in winter as an Ice-Creeper and in summer as a Shoe-Econo-

mizer. It is made in four sizes, of the best rubber, and easily shapes itself to any shoe. Lifting the wearer a quarter of an inch from the ground, it lessens the need of overshoes, and makes slipping impossible. It contributes to health by allowing the air to circulate under the feet, keeping them dry and warm. It outwears two leather soles, and makes walking easy. Economical, healthy, comfortable, and safe, it has everything to commend it and nothing to condemn it. It is made by the Crescent Ice-Creeper and Sole Co., of Meadville, Pa.

The "Pedestrian" Tennis-Shoe.

THE tennis-shoe, by which general term all kinds of walking, sporting, and yachting shoes with cloth tops and rubber soles are called, is more in favor this season than ever before, and the shoe appears in better shape than in any past spring. When first put



THE "PEDESTRIAN" TENNIS-SHOE.

upon the market it had little or no style. To-day it is "not in it" if it hasn't a deal of style. Careful work is put into the fitting and general make-up, and the result is that manufacturers are turning out a class of goods that will challenge the attention of the most fastidious. The illustration accompanying this shows what is known as the "Pedestrian" tennis-shoe. It is a shoe most excellent in shape, and is very stylish. The upper is made of a variety of textures in various colors. It is an exceedingly comfortable shoe, being adapted for all out-of-door sports, and is also much in favor among gymnasts. The rubber parts are made of the best and most durable compounds. Manufactured by the National India-Rubber Co., Bristol, R. I.

Two Rubber Penholders.

ALMOST everything has been claimed for India-rubber, and it therefore was no surprise to the stationery trade when a prominent firm of manufacturing stationers brought out the Anti-Nervous Penholder. The idea in this, and it is found to be a correct one, is that the chemicals in ink acting upon the metal of which the pen is formed generate a current of electricity more powerful than many people would imagine, and that current naturally runs up into the hand and induces nervousness. The pen is therefore provided with a piece of molded rubber that acts as an insulator for the hand, and that also gives the fingers a firm and pleasant grasp. There has been a very large call for this penholder, and the manufacturers are in possession of some strong testimonials. The same house have brought out what is known as the Anti-Cramp Penholder which they designate as a new and revised edition of their popular anti-nervous penholder, of which thousand gross have been sold. In this penholder a tip of corrugated rubber is slipped over the end, and as there is a brass shield at the end, the pen does not come in contact with the rubber at all. This penholder is certainly very agreeable to the touch, and is no doubt effective in overcoming that bane of literary people, "writers' cramp." Manufactured by Cutter, Tower & Co., No. 14 Federal street, Boston.

A Hinged Hose-Clamp.

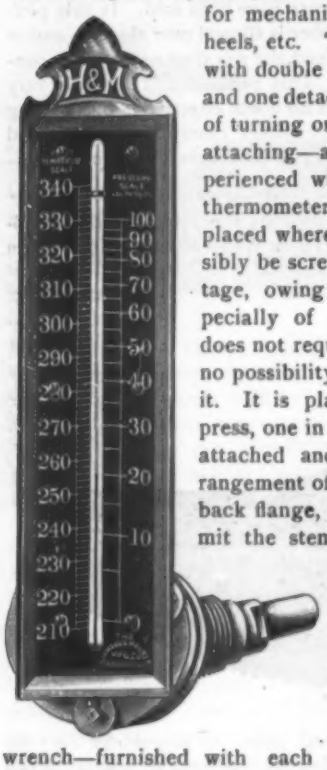
THE accompanying cut represents the Hinged Hose Band-Clamp manufactured by the Tuerk Water Meter Co., of Fulton N. Y., who claim for it several points of superiority over the old clamps, the principal being the readiness with which it can be applied to steam-hose situated under cars or in any place from which it cannot be taken down. It has the well-known features of the regular hose-clamp made by this firm [see this journal for January, 1892] of the two tongs extending in opposite directions thereby closing the holes as tight between the two lugs as at any other point not allowing same to leak, as is the case with the old style of clamps. It also has the strengthening ribs which extends from the top of the clamp to the point on lugs to prevent lugs from drawing together before the hose is perfectly tight between the same. The convenience of this device will readily be seen.

HINGED HOSE-CLAMP.

A WRITER in the *Scientific American* says that twenty Indians in the Amazon forests can gather 40,000 pounds of rubber in one season.

Improved Thermometer for Vulcanizing-Press.

THE annexed cut represents an improved thermometer, designed especially for use on vulcanizing-presses, for mechanical rubber goods, belting, heels, etc. This thermometer is made with double flanges, one on the frame and one detached, to avoid the necessity of turning or screwing it around when attaching—an objection hitherto experienced with the old-style threaded thermometer—and it can, therefore, be placed where the others could not possibly be screwed in, which is an advantage, owing to the compactness, especially of the smaller presses. It does not require any wrenching; hence no possibility of straining or breaking it. It is placed on the side of the press, one in each plate, and is easily attached and detached, without derangement of pipes. The detached or back flange, which is bored out to admit the stem of the thermometer, is threaded for one-inch pipe thread, and contains three permanent bolts, and three holes, equidistant, and is screwed into the plate by means of a pronged steel wrench—furnished with each instrument—having two prongs, fitted in the holes. After it is screwed up tight and the bolts brought into position, the thermometer is inserted and the two flanges bolted together with packing between, insuring a steam-tight joint. The thermometers and flanges are interchangeable, being machined and drilled to templets. This thermometer is made with the new black dial, manufactured by the same firm, which greatly facilitates reading and will not corrode. It will accurately indicate the exact temperature and pressure of the steam and is extremely sensitive. Made by The Hohmann & Maurer Manufacturing Co., Plymouth and Jay streets, Brooklyn, N. Y.



An Interesting New Catalogue.

THE Imperial Rubber Co., of New York, have issued a new price-list and catalogue of thirty pages, gotten up in good style with a tastefully-designed cover and replete with information. The company have four brands designated as "Vulcan," "Premier," "Supreme" and "Challenge," applying to hose and beltings. The company carry a full line of hose—garden, water, engine, hydrant, steam, tanners, oil, armored, rock-drill, brewers, suction, air-brake, vacuum-brake, cotton, linen and rubber fire-belting, gas, finger cot, brake, bill tie, soda, beer, fire extinguisher, elevator shaft, acid and extra pure tubing, packing, valves, gaskets, jar-rings, stopples, wagon springs, deckle straps, mats, couplings, reels, etc. The company report an excellent business, having the trade of many large corporations, and are excellent sellers of goods. They will in a few days move to new and commodious quarters in the Electrical Exchange, No. 136 Liberty street. George E. Austin, the efficient manager, deserves much credit in building up so large a business in so short a time.

Aluminum Lanolate.

THIS is a new compound said to have been produced in Germany, and to be adapted for use as an ingredient in rubber compositions. Suint or wool grease, which is obtained in quantities from wool while cleansing it, is made into a soap by saponifying it with alkaline ley. A solution of alum being added, a brown precipitate falls which is aluminum lanolite. This substance, separated from the mother liquor, is then dried when it is ready for use. When dissolved in a mineral oil it forms a gelatinous mass that may be mixed either with Gutta-percha or India-rubber, and it is also said that the compound is soluble in any of the solvents of rubber or gutta-percha. The statement is here given for what it may be worth. If it has a foundation in fact, more may be heard from this substance. It has also been applied to increasing the viscosity of mineral lubricating oils, with, it is said, entire success.

Rubber-Goods Exports From New York.

THE declared value of exports from New York during the five weeks ending March 29, 1892, were exceptionally large, though a corresponding increase under the head of "India Rubber Goods" is not shown. In a parallel column is given the value of rubber-goods exports to the same countries since the beginning of the year, the record now being brought down to the conclusion of the first quarter of the year. The values as given by the Collector of the Port follows. It may be mentioned that 53 per cent. of our exports of rubber goods last year went through the port of New York.

To—	Five Weeks.	Since Jan. 1.	To—	Five Weeks.	Since Jan. 1.
Amsterdam	$ ——	$ 111	Genoa	$ 2,578	$ 2,578
Antwerp	132	3,006	Gijon	——	8
Berlin	455	1,042	Glasgow	——	660
Bolton	——	58	Hamburg	567	8,327
Bolivia	——	1,385	Havre	10,678	40,577
Brazil	575	1,793	Hayti	157	376
Bremen	332	1,635	Hong Kong	380	380
British Africa	——	240	Japan	2,521	3,682
British Australia	533	4,574	Leipsic	——	147
British Honduras	——	4	Liverpool	1,310	2,562
British E. Indies	——	128	London	2,471	5,298
British W. Indies	480	1,011	Marseilles	——	1,003
Budweis	——	452	Mexico	2,031	5,671
Central America	2,213	2,836	Newfoundland	——	258
Chili	215	850	New Zealand	——	23
Christiania	——	499	Peru	98	490
Colombia	388	1,577	Porto Rico	162	241
Constantinople	55	55	Rotterdam	162	2,244
Copenhagen	338	1,416	San Domingo	——	30
Cuba	2,392	5,593	Sandwich Islands	——	152
Danish W. Indies	——	84	St. Gall	——	396
Dutch E. Indies	5	76	Venezuela	679	1,336
Dutch W. Indies	14	198	Vienna	120	212
Ecuador	167	275	Zurich	228	228
French W. Indies	——	15			
			Total	$32,436	$105,707

The value of crude India-rubber exported from New York during the five weeks ending March 29 also shows a relative falling-off, the shipment in detail having been as follows:

To—	Packages.	Value.	To—	Packages.	Value.
Antwerp	30	$ 300	Japan	1	$ 47
Bremen	8	1,490	Liverpool	87	7,253
Hamburg	170	9,775	London	6	450
Havre	200	6,125	Rotterdam	20	200
Hull	107	11,900			
			Total	619	$37,540

Exports of India-rubber scrap were made to Barcelona to the value of $360; to Glasgow, $2899; to Havre, $1201, and to Liverpool, $852—total, $5252. Besides, Havre took $275 worth of India-rubber thread and $2300 worth of "India-rubber thread waste."

The Rubber-Goods Trade in Cincinnati.

[BY OUR RESIDENT CORRESPONDENT.]

CINCINNATI as a rubber market will hold her own without doubt. While comment is frequently heard that she cannot support a single establishment that will either wholesale or retail the entire line of rubber productions, the fact is lost sight of that by a division of the honors we are so well cared for in the different departments by such houses as the following:

J. H. Kohmescher & Co., Wholesale and Retail Clothing, Sundries, Boots and Shoes.
The A. C. Cattell Co., Retail Clothing, Sundries, Boots and Shoes.
George W. McAlpin Co., Wholesale Clothing.
Specker Brothers, Wholesale Clothing.
Peant & Isaacs, Wholesale Clothing.
Chesapeake Rubber Co., Wholesale Clothing, Boots and Shoes.
Alms & Doepke Co., Wholesale and Retail Clothing.
The John Shillito Co., Wholesale and Retail Clothing.
Gray & Heston, Wholesale Sundries.
R. Wurlitzer, Brother & Co., Wholesale Sundries.
Calvert & Brook, Wholesale Sundries.
Bradford Belting Co., Mechanical Goods.
American Oak Leather Co., Mechanical Goods.
Joseph Sharp, Mechanical Goods.
Merkal Brothers, Mechanical Goods.
Thomas J. Bell, Mechanical Goods.
Puchta Pund & Co., Mechanical Goods.
E. A. Kinsey & Co., Mechanical Goods.
George R. Hawley, Small Hose.
Cincinnati Lead Pipe Works, Small Hose.
Merrie Verhage & Co., Small Hose.
Hugh McCullom & Co., Small Hose.
John H. McGowan Co., Small Hose.
W. G. Brown, Selling Agent Cleveland Rubber Co.

The first two, sixth and last named are the only exclusive rubber dealers we have, all the others being engaged more or less in other lines.

The smaller retail trade in clothing, boots and shoes is cared for by the respective dealers in the corresponding trades, while garden-hose can be relegated to the prosperous plumber, but Kohmescher and Cattell have the bulk of retail demands.

Hardware people do not make any special effort to push their rubber trade, and the demand from them is correspondingly small. The wholesale trade find sales for their stock in almost the entire West and South, reaching to distant Washington and California.

Cincinnati's past record has shown her preference for the cheaper grades, but the last few years exhibit a much better quality, and from recent stock orders the impression is given that the best is none too good. The above is especially true of garden-hose, clothing and footwear. With the former the old style lap-joint tube held full sway, but now all the dealers without exception ask for seamless tube, that being the only thing that will successively resist our variable pressure.

In clothing the sheeting-drills and serges are seldom seen on our retail counters, mackintoshes, woven cantons and silks predominating, but the former still heads the list for country purposes. In footwear the zephyrs and pure gums are fast replacing the old-time cheap and clumsy article.

Taken as a whole the rubber business for this city has been very satisfactory, and while clothing during last fall was depressingly dull the demands in other lines more than made up the difference. The spring trade with us never amounts to very heavy demands in clothing but in garden-hose and mechanical goods in general the outlook is fine and all unite in assuring the prosperous times ahead. J. H. Kohmescher & Co. have the best located and arranged retail rubber store we have ever had and for their enterprise well deserve the success they are meeting with. The A. C. Cattell Co. will come next in location and appearance, and is possibly a close second. B.

Cincinnati, Ohio, April 5, 1892.

The Uses of Rubber in Mining.

THE uses of rubber in mining and metallurgy, as described in a recent issue of THE INDIA RUBBER WORLD, are far more numerous and extensive than might be supposed without reflection. A certain amount of rubber pipe is used in hydraulic mining where the pressure is not too great. In a mine hoisting-works comparatively little belting is used, but rubber feed, steam and fire hose and the ordinary steam and pump packings are employed. Underground are air-hose of rubber for the power-drills, pump-fittings, suction-hose, etc. An extended use is suggested for rubber ventilating-pipes in connection with the fans and blowers. Where electrical power is used the common rubber and vulcanite insulations and fittings are employed. The metallurgical works take quantities of rubber driving-belts, elevator-belts, vanner-belts, sheet rubber, rubber cement, common rubber hose, acid-proof hose for handling chemical solutions, etc. Miscellaneous rubber sundries, such as boots, coats, blankets and other small goods of the regular trade are largely consumed in the mining regions. The article referred to describes the conditions and requirements for mechanical rubber goods in mine use and suggests new applications of the material.—*The Mining Industry* (*Denver, Col.*).

New Portrait of Mr. Converse.

THE Boston Sunday *Globe* thus illustrates the Hon. E. S. Converse, of the Boston Rubber-Shoe Co., and adds: "He is one of the noted men seen on State street. He is president of the First National Bank of Malden, director of the Revere National Bank of Boston, president of Boston Belting

Co., trustee of the Boston Five Cents Savings Bank and director in many financial and commercial institutions. He was the first mayor of the city of Malden and has often shown his interest in that city in a substantial way. Mr. Converse is treasurer and manager of the great Boston Rubber-Shoe Co.

TRADE AND PERSONAL NOTES.

THE stockholders of the New Brunswick (N. J.) Rubber Co. at their annual meeting on March 15 re-elected the board of directors, without opposition. The names are James F. Langdon, P. A. Van Deventer, William H. Acken, Lewis T. Howell, Henry R. Baldwin, R. G. Van Pelt and Henry Richmond. During the year the profits amounted to $23,728.65, and a dividend of 6 per cent. on the capital stock of $300,000 was declared, payable on April 1. After paying the dividend $5728.65 remained to be added to the surplus account. During the year 350,000 pairs of lawn-tennis shoes were made.

—Several employés of the rubber factory of L. Candee & Co., at New Haven, Conn., having been discharged lately, a report gained currency that the cause was the activity of the men in their labor organizations. This is denied by the president, Henry L. Hotchkiss, and Superintendent Elliott, who claim that neglect of their work was the only cause of complaint.

—L. Candee & Co., New Haven, have made a contract with B. F. Sturtevant & Co., of Boston, for the equipment of their rubber-factory with the most approved heating and ventilating apparatus. In the cellar of the main building a fan ninety inches in diameter will be placed, connected with a system of large pipes, one to run to each room. This is intended to distribute cool air in summer and hot air in winter.

—Judgment for $90,326 was entered in New York on March 17 against the Brookhaven Rubber Shoe Co., of Setauket, L. I., in favor of the New York Commercial Co., for balance of account for money lent, goods sold, etc. The latter concern is that headed by Charles R. Flint and engaged in the crude-rubber trade. The Brookhaven company were incorporated in August, 1888, succeeding the L. R. Smith Rubber Co., and had a capital stock of $433,000. They leased the plant to the Manhattan Rubber Co. about fifteen months ago.

—Ed. Toucault, No. 77 Rue de Rambuteau, Paris, France, takes much interest in American rubber matters, and is always on the outlook for novelties from this country. He is a constant reader of THE INDIA RUBBER WORLD, prefacing his inquiries for goods with an allusion to it. The magnitude of his business can be judged from the fact that he employs ten travellers in Europe who are continually on the road. Few rubber-houses in this country employ so many.

—An order for sixty gross of bulb syringes came the other day from Mexico to the Atlas Rubber Co., New York. When packed these goods weighed over three tons.

—The Canfield Rubber Co., Bridgeport, Conn., are extending their factory buildings at Railroad and Myrtle avenues, out to the street line, to conform to the shape of other portions of their buildings. The addition will be devoted to office purposes. The plans are by Henry A. Lambert, the masonry work is being done by John Rutherford and the carpentry work by A. W. Burritt & Co., of Bridgeport.

—It is reported that J. B. Laughton, from New York, has located at Westfield, Mass., a manufactory of raised-surface color-pads for inking rubber stamps, to begin operations about May 1, with a dozen hands.

—The offer of a prize of $5000 by the Canfield Rubber Co., manufacturers of seamless dress-shields, for a poem or song for the Columbian World's Exhibition, has been declined in a courteous letter from General-Manager Davis, stating that the committee to whom it had been referred did not consider its acceptance within the scope of the authority of the management of the fair.

—The Southern Rubber Co., of Richmond, Va., have lately moved into their new store at No. 1206 East Main street. W. T. Moseley is the manager of the company.

—Ohl & Haefner, of Newark, N. J., builders of rubber-machinery, recently sent a dishonest bookkeeper to jail. It now transpires that the young man was a very versatile fellow. He is the son of a baroness in Dresden, and besides being in the habit of altering pay-rolls, is a clever forger, and one whose matrimonial alliances and escapades would fill a volume.

—Hammill & Gillespie, of New York, who make a specialty of supplying the rubber trade with various ingredients used in rubber compounding, have fitted up fine offices in connection with their stores at No. 240 Front street.

—An example of business enterprise that has won many expressions of commendation, was shown in the page advertisement in THE INDIA RUBBER WORLD for March where five young men, travellers for a prominent druggists'-sundries house presented their cards to the trade.

—Charles E. Gibbs, the mold-maker, has removed his machine-shop from No. 4 Beverly street to No. 42 Batterymarch street, Boston, where he has larger quarters and better facilities.

—John Becker, who does considerable fine die and machine work for rubber manufacturers, has erected a new plant in Fitchburg, Mass.

—The Brookhaven Rubber Co. were organized in the Mills Building, New York, on April 1, to succeed the Brookhaven Rubber Shoe Co, with works at Setauket, L. I. Thomas Russell was elected president and W. P. Wadsworth secretary and treasurer. The directors are Messrs. Russell and Wadsworth and Willis S. Paine, J. W. Reinhart and George W. Murray.

—A. C. Hesser has made application for space in the rubber department of the Pennsylvania exhibit at the Columbian World's Exposition, and expects to show a full line of the Marion hot-water bottles.

—Walter S. Ballou, of the Woonsocket Rubber Co., recently sent a pair of their miniature rubber boots to little Ruth Cleveland and in return received a gracious letter of thanks from the little one's mother.

—The Commonwealth Rubber Co., of New York, who have just moved into a fine large store on Vesey street, are about to add to their line of rubber goods by putting in a full line of mill supplies. The company employ ten travelling men who visit the hardware and factory trade the country over. The president, Mr. Samuel Randolph, was for years a prominent hardwareman, and he is therefore thoroughly at home in selling to that trade. He is in a position to market specialties and general supplies.

—The plant of the Standard Rubber Co., at Campello, Mass., having gone into new hands, the retiring superintendent, J. T. Robinson, and the retiring bookkeeper, L. E. Niles and others, have organized a co-partnership for the manufacture of mechanical rubber goods. It is stated that machinery for the factory has been ordered, and that the company are looking for a suitable location. As the members are all citizens of Campello they will endeavor to secure a site at that point.

—The Metal Last and Tree Co., of Boston, have received a number of pairs of aluminum boot-trees, which are to be used by a large rubber-shoe concern. The trees are exceedingly handsome, are much lighter than wood, and promise to make a decided advance in the manufacture of rubber boots.

—The Fitchburg (Mass.) Steam-Engine Co. announce their removal into their new quarters. For several years there has been an increasing demand for their engines until they were unable to keep up with their contracts, although running nights for some time. Their new factory is fitted throughout with all the best modern tools and facilities for handling large work, such as travelling cranes, etc., and is more than twice the size of their old plant. Their facilities for shipping are the best, as they can load directly from their erecting room on to the cars. They are now in shape to fill all orders for either large or small, vertical or horizontal, high-speed, slow-speed, or compound condensing engines.

—The American Wringer Co. have purchased a tract of land from the Social Manufacturing Co., in Woonsocket, R. I., for improvement. It is understood that some of the work now performed in the other factories of the wringer company is to be concentrated at Woonsocket.

—One of the largest driving-belts in the world has just been manufactured by the Boston Belting Co. It is 150 feet long, 64 inches wide, 8-ply, stitched, and weighs one and a half tons. It is to be used as a driving-belt by one of the traction companies at Denver, Col.

—The Phœnix Iron Co., Trenton, N. J., who failed recently, were among the original manufacturers of rubber machinery. Several of their calenders and numbers of their grinders are in use in rubber-mills to-day. The receiver is Joseph Stokes, superintendent of the New Jersey Steel and Iron Co.

—The excellent illustration in the March number of THE INDIA RUBBER WORLD of Pearl's corset-shield was drawn by Eugene Pearl, the inventor of the shield. Mr. Pearl is a well-known artist, with a studio at No. 23 Union Square, New York, where he invents or sketches as his fancy dictates.

—The Singer Manufacturing Co., whose machines are so well known to rubber-manufacturers, burn 250 tons of coal a week in their Elizabethport (N. J.) factory.

—In the Columbian World's Exhibition in 1893 C. J. Bailey & Co., of Boston, will have a space 100 feet square, where will be shown the specialties that Mr. Bailey has invented and that he has marketed with such singular success. He will also have circulars printed in all the modern languages, and attendants who can converse in almost any living tongue.

—The Lockwood Manufacturing Co., of East Boston, who are well known as an enterprising and progressive firm, manufacture all the St. John cylinder packing used in New England.

—The Cleveland Rubber Co. have in their specialty department thirty-one presses, both hand and hydraulic. In their new department for mold work they will have ten new hydraulic presses, while in the mechanical-goods department they have three presses, one thirty-five feet, and two twenty-five feet long.

—Attaching rubber soles to leather shoes is a business that Mr. Drew, No. 63 Elm street, Boston, has made exceedingly remunerative.

—Charles T. Wood, formerly manager of the sales of the Ætna Rubber Co., Boston, has resigned his position and now has office room at No. 19 Pearl street, Boston, where he is handling a line of carriage-cloth and light oil-cloth goods.

—The New England Electrical Club has been formed in Boston, and a great many of the prominent insulated-wire men have become members. Fine rooms have been leased on Bosworth street, near the building of the Boston Press Club, and the organization is already a very prosperous one.

—The National India-Rubber Co., of Bristol, R. I., have added to their equipment a large engine built by the Corliss Engine Co., of Providence.

—Ripley & Bronson, St. Louis, Mo., who are sole agents for the Canfield pure-gum molded gaskets, report large sales for these goods in their section.

—A corporation has been formed in Melrose, Mass., for making maple shoe-lasts for use in rubber work; also for making lasts and trees of compressed fiber for the same industry.

—The Cleveland (Ohio) Rubber Co. have been awarded by the World's Fair management a contract for 25,000 feet of fire-hose, which is said to be the largest contract ever made in this line, and involves an outlay of $20,000. The competition was severe on this particular contract.

—The Imperial Rubber Co. (New York) report a large contract for belting, thousands of feet of ¾-inch garden-hose, with plenty of fire-hose.

—The New Brunswick (N. J.) Rubber Co. report a very large demand for all styles of tennis goods, particularly their "Oxfords" in red or white soles, "Balmorals," and the "Norfolk Tennis" with corrugated soles. Business in all respects has been excellent so far.

—A. D. Gates & Co., Chicago, are actively handling the goods of the Woonsocket Rubber Co., having lately sent out 35,000 circulars in that interest.

—Chicago is said to be the largest shoe and clothing market in the world. The claim however comes from that city; New York, London and Paris having said nothing on that subject as yet.

—Navigation on the great lakes has been resumed and soon rubber men will be sending forward large quantities of boots and shoes, clothing, etc. Freight rates this year will be low, as a large amount of grain is already chartered to come this way, and the boats will seek return freights. It has become a practice with large rubber manufacturers and jobbers to await the opening of navigation before they send large stocks westward.

—Cahill & Holters, Dayton, Ohio, are carrying the "Bell" brand of the Boston Rubber Co. Mr. Cahill, who was formerly a retailer, has had much experience with these goods.

—The Rubber-Step Manufacturing Co., of Exeter, N. H., though only just beginning work, have, it is stated, orders in hand sufficient to keep the works busy for some months ahead. One large order is mentioned as coming from Amsterdam. The owner and manager of the new concern is Daniel Gilman, recently in the same business in Boston.

—Little Rock, Ark., has a rubber-stamp factory which is mentioned as filling a good order for the new Citizens' Bank of that city.

—The Columbia Rubber-Stamp Works, of Chicago, have leased the store at No. 196 La Salle street for two years at $1500 per year.

—Models for a new nozzle for use on lawn-hose are being gotten out by the Columbia Manufacturing Co., of Brockton, Mass.

—The people of North Adams, Mass., are pleased at the announcement of a first quarterly dividend of 1½ per cent. by the Celluloid Company. As the *Express* remarks: "This means that the stock which was given for the Zylonite works is valuable property and that is money to Adams."

—It is stated that 12,000 pairs of Bailey's Heel Cushions have been sold already by the retail trade.

—The American Rubber Co., who are pushing their export trade with energy, report a good order from Chili for boots, shoes and rubber clothing.

—The Wales-Goodyear Co. began the occupancy of their new Chicago headquarters, Nos. 257-259 Franklin street, in charge of Selling-Agent A. D. Wentz, on April 1.

—The Boston Rubber-Shoe Co. have limited the annual shutdown in their factories at Fells and Edgeworth this month to three days—April 7, 8 and 9. For several years past both factories have been closed for two or three weeks in April. During the past winter the rubber trade has been better than for years, about 3000 persons being employed in both factories and the pay-roll amounting to about $15,000 per week. The weekly output of the two factories is about 227,000 pairs of shoes.

—George H. Sanford, selling-agent for the Lycoming Rubber Co. for several years, retired from that position at the beginning of the month. It is stated that he has other business interests which claim his attention, and that he may retire wholly from the rubber trade.

—A very sensible building law now enforced in large cities compels all new theaters to have fire-proof drop curtains. There have been, as is well known, iron curtains, but they have been so heavy that they have been far from successful. A curtain is therefore made of asbestos which is light in weight and can be lowered or raised very rapidly and with but little effort. This curtain is flexible as any cloth and while it resembles cotton duck in appearance it may easily be decorated or painted so as to be very beautiful. As a protection from fire it is a most decided success. One asbestos company has furnished ten of these curtains for New York theaters and numbers of others in Philadelphia, Chicago and other cities.

—The interest in the use of Ramie still continues and a woolen mill near St. Louis, Mo., has just been at work manufacturing some into cloth by way of experiment. The American Fiber Co., a Southern concern, have also patented a machine which it is said turns out the finished fiber ready for the cards. The cloth now manufactured is not of the finest quality but it marks a decided advance over what has been done in the past.

—The "Noiseless" water pail or bucket is the subject of a recent patent. It is fitted with feet made of India-rubber, and rubber-protected eyelets, handle and guards, which remove all the noise incident upon handling. The eyelets themselves are made somewhat larger than usual, so that the rubber can easily be sprung in, and the handle work freely. One of the advantages of the rubber feet on the pail are that no marks are left on the carpet or tables, and the wear and tear of the pail itself is greatly reduced.

—The rich vein of graphite that has been discovered in Providence, R. I., still continues to interest rubber and other manufacturers. In its widest part the vein is 45 feet, but the exact length has not as yet been estimated. At present about four tons per day are being taken from the mine and soon the proprietors hope to be taking out 100 tons per day. Thus far it seems to be the best graphite mine in the East. The Eureka mine in California yields about 1000 tons a month, which is considered a very good yield. At the present time the product of the Rhode Island mine is sent West where it is used as foundry facings. Very soon a plant will be erected for pulverizing it, in which shape the graphite brings $30 per ton.

—That it does not pay to run down another firm's business is pretty well shown by an incident that happened not long ago. An old and wealthy house, becoming jealous of a young, pushing competitor, spoke to the trade of them as "young fellows, who made goods and sold them below cost" and further labeled them as "men who did not know what they were about." The result of this free advertising was, that the trade rushed to them to buy some of those goods that were sold so cheap, and gave these young men such a start that since they have been exceedingly prosperous, for the fact was they were simply selling goods cheap because they were manufacturing them at low cost and were making a handsome profit.

—Francis Reddaway & Co., No. 52 New street, New York, issue a circular describing woven linen hose and machine belting that has an exceedingly English look. It is not, however, because they are Anglomaniacs, but rather because the parent concern is the well-known house situated at Manchester, England. The factory of the American branch is situated at Paterson, N. J.

—Mr. Thomas, the former superintendent of the Pará Rubber Shoe Co., has just returned from a trip to Bermuda.

INCORPORATION NOTES.

THE incorporation is reported in New Jersey of the Thetford Asbestos Cotton Co., for the purpose of mining and selling asbestos and asbestos goods. The capital mentioned is $100,000. The incorporators are Jacob W. Bauer, Frank J. Whitcomb and Edmond W. Powers, of New York, and Alfred B. Farnsworth, of East Orange, with places of business in each of the cities named.

—At a special meeting of stockholders of the Derby Comb Co., at Birmingham, Conn., the capital was increased from $5000 to $20,000. This has been made necessary by the constant increase of the business of the company, who have purchased a new factory building and expect shortly to give employment to 150 persons.

—The Elastic Tip Co. have been incorporated at Portland, Me., with $100,000 capital, for the purpose of manufacturing rubber goods generally. The officers named are: John F. Eldridge, president, Boston, Mass.; Philip W. Pratt, treasurer, Boston.

—The Goodyear Gossamer Co., at Hudson, Mass., having come within the sole control of its president, L. D. Apsley, as reported in this journal last month, will be known hereafter as the Apsley Rubber Co. The articles of incorporation mention $100,000 as the amount of capital, name Mr. Apsley as president and treasurer, and specify that all kinds of rubber goods are to be manufactured, including boots and shoes. Messrs. Norton and Hamilton, salesmen for the company, have been admitted to the directory.

—Application has been made by James M. Stotesbury, William A. Stotesbury, Edward M. Mundy, Harry C. Dunn and Henry W. Jessup for a charter of an intended corporation at Chester, Pa., to be known as the Chester Rubber Co. The objects of the company are to reclaim rubber from old rubber, waste and scrap; the buying and selling of rubber and rubber goods and the carrying on of the general rubber-manufacturing business.

ON THE ROAD.

THE salesmen of the American Rubber Co. for the present year are: F. C. Howlett, Syracuse, N. Y.; E. G. Stearns, Chicago; F. W. Perry, St. Louis; and in New York and vicinity, W. E. Langley, H. E. Bill, G. B. Widner, E. F. McGovern, H. Bloom and D. W. Seast. With E. H. Paine as general selling agent in Boston and William Morse in New York, one can hardly escape the thought that the "American" team is a strong one.

—F. Winsor Ball is now selling the goods of the Cable Rubber Co. in and around Boston.

—J. T. Atwater, formerly with the Hodgman Rubber Co., is selling the goods of the Cable Rubber Co. in New England.

—Mr. Covell, who expected to begin travelling for the Globe Rubber Works the first of February, is still suffering from the effects of a railroad accident, and his physician has absolutely forbidden his going on the road.

—Bradford H. Doty, brother of the proprietor of the Atlas Rubber Co., by a general vote recently, was accounted the most popular salesman in the druggists'-sundries trade.

—One of the oldest travellers in the country, in the line of piston and other packing, is R. D. Lane, who has long handled the goods of the Garlock Packing Co., Palmyra, N. Y., and with unvarying success.

—Eugene Herbert, of the Atlas Rubber Co., has just returned from an eight weeks trip in the West, embracing with other cities Chicago, St. Louis, Kansas City and St. Paul. He obtained many excellent orders and the trip was a successful one in a practical sense, notwithstanding complaints in a general way of depressed times. Mr. Herbert passed through Canada where competition is very close with the Dominion factories, they being protected by an import duty of 25 per cent., but he succeeded in obtaining some good orders which were given him with the frank confession of a superiority in goods. Mr. Herbert will leave for the East in a few days, and later will go to Mexico.

INDIVIDUAL MENTION.

Isaac F. Williams, Jr., assistant to his father as superintendent of the National India-Rubber Co., Bristol, R. I., has returned from a visit of several months to England, France and Germany, during which he found opportunity to see something of rubber-manufacturing abroad.

—Ratcliffe Hicks, president and general manager of the Canfield Rubber Co., attended the annual dinner of the Alumni of Brown University in New York on March 25. That dinner revealed the fact that quite a number of New York's successful business men are graduates of Brown.

—Joseph Banigan, the rubber manufacturer, seems to have no end of varied business interests. He is described by the New York *Tribune* as "a large stockholder in the Providence *Telegram*, the organ of the Rhode Island Democracy." When the big hardwaremen's dinner was given in New York a short time ago Mr. Banigan attended it as president of the big American Wringer Co., which organization was also represented by several other officials.

—Samuel K. Wilson, proprietor of the Globe Rubber Works, Trenton, N. J., has been suffering with cataract of the eye, and for a time this affliction was so severe as to render him nearly blind. He is, however, rapidly recovering.

—C. E. Tingley, manager of the Standard Rivet Co. of Boston, whose goods are becoming so well known among rubber-shoe manufacturers, was brought up in a shoe town, his native place being Naugatuck, Conn.

—John Hopewell, Jr., president of the Reading Rubber Manufacturing Co., has taken another trip South for his health.

—Mr. Elliot, the genial superintendent of the Candee Rubber Co., is the fortunate possessor of one of the original Goodyear boots.

—Major E. C. Pierce, of the Pierce Rubber Mills, Danversport, has been suffering from a cataract but is out again and thoroughly recovered.

—E. F. Bickford, superintendent of the Boston Rubber Shoe Co., has been spending some weeks at Lakewood, N. J.

—Walter G. Chase, treasurer of the Mason Regulator Co., Boston, has gone to Europe for a two months trip.

—Robert D. Evans, president of the American Rubber Co. is in Florida for a few weeks.

—De Witt G. Ray, the bright literary man of the *Boot and Shoe Recorder*, is just back from an extended trip through the West.

—I. W. Dodge, agent of the Standard Thermometer Co., Boston, Mass., after two weeks' severe illness, is back again at his Boston office.

—Ratcliffe Hicks, of the Canfield Rubber Co., has lately purchased several business houses in Bridgeport, Conn.

—The late Spencer M. Alpaugh, of Trenton, N. J., whose death in Florida was mentioned in this journal last month, is said to have left an estate valued at $200,000.

—While E. H. Cutler, of the Woonsocket Rubber Co., was in Chicago last month on business in connection with the shoe and leather exhibit at the World's Fair, he was summoned home by the sad intelligence of the dangerous illness of his ten-months-old daughter, Dorothy. He started at once, but did not reach home in time to see her again alive. She died Saturday, March 12, at Newton, Mass.

—C. L. Johnson, treasurer of the Candee Rubber Co., is absent for a few weeks in the South. Mr. Johnson is an expert horseman, and a portion of his trip will be made on horseback. His objective point is Aiken, S. C., where some other rubber-men are also enjoying a vacation.

—Rubber-men who have been at Lakewood, N. J., lately are the Hon. E. S. Converse, of the Boston Rubber-Shoe Co., and Walter S. Ballou, selling-agent for the Woonsocket Rubber Co.

—Charles A. Daniels, a well-known rubber dealer in Philadelphia, has been quite ill of late.

—Charles F. Wigand, of the Summit (N. J.) Rubber Co., has gone to Georgia with his family for a few weeks.

TRADE PUBLICATIONS.

Several new pamphlets have been received from the Standard Thermometer Co. (Peabody, Mass., and Boston), describing their thermometers, thermostats and telemeters, bringing the series of pamphlets up to No. 29. They are tastefully gotten up and are full of interest to those interested in heat measurement and regulation. Special reference is made to the adaptation of some of these devices to rubber-kiln use.

—A handsome little book is entitled "Catalogue of Latest Styles of Rubber Boots and Shoes Manufactured by the Boston Rubber Co." The goods catalogued within it bear the "Bell" brand, or trade-mark, which is both attractive and striking in appearance. Fifty-six engravings are introduced to represent the appearance of the various styles bearing this brand. List prices are also given of the goods described. The book can be conveniently carried in the pocket or kept near at hand in pigeon-hole or desk-drawer.

Wanted No More "Expense Accounts."

A COMMERCIAL traveller employed by a large New York house recently received a letter which he read to an India Rubber World man. Imitating the voice and accent of the writer, the senior member of the firm, this is the way it sounded:

"Mr.—— ——, *Dear Sir:* Your oxpense accoundt undt route list received mitowdt some orders. We don't want oxpense accounts undt route lists, we want orders alreatty. We have larch maps in New York to look up route lists, und larch families to make oxpense accoundts.

"Mr. —— ——, in your oxpense accoundt is $2.50 for pilliards, blease don't puy some more pilliards. We oxpress you two boxes mit cigars, one costs $1.40 undt the oder $1.00. Schmoke the $1.40 mit yourselluf, undt gif the $1.00 box to your gustomers, one pehind each meal. Also we oxpress a list of samples that cost $13 per gross, sell dose at $9.25 per dozen undt if you cant get dot $9.25 take $2.25. They haf peen in stock dirty-dree years alreatty. Call them 'Mascott' or 'Mikado.' Yours very truly,

"Hengelheimer & Isaacstein."

REVIEW OF THE RUBBER MARKET.

UNTIL April 1 the crude rubber market was very active and strong, all manufacturers being free buyers at the highest prices, but the announcement of the incorporation of the United States Rubber Co. placed a new phase upon the situation, and the demand slackened very materially. With one company after another in a transitory state it was natural that the owners of plants should wish to reduce stocks to a minimum and relieve themselves of all holdings not necessary for consumption from day to day. This state of the market will probably last until the disposition of all the rubber companies involved has been determined. Business is "good" to "excellent" in every branch of the trade, and when the transitory stage is passed, it probably will be found that stocks in manufacturers' hands will be very light and a season of animation will then ensue, although crude rubber will come into the market through different channels. It is probable that the supply of rubber will be better graduated in the future with the demand, and large stocks among shoe-men will become a thing of the past. The statistical position is at the present a strong one and notwithstanding the light demand, prices are well maintained. This applies to all grades, Centrals being perhaps in better demand than Africans. In Centrals the arrivals have been taken as fast as received.

The world's stock of Pará rubber on April 1, compared with March 1, is estimated as follows:

	March 1, 1892.	April 1, 1892.
United States	846 tons.	776 tons.
England	1440 tons.	1490 tons.
Pará	640 tons.	740 tons.
Afloat to United States	846 tons.	695 tons.
Afloat to England	250 tons.	50 tons.
Total	4022 tons.	3751 tons.

One year ago there were 4203 tons, distributed as follows: United States, 1126 tons; Pará, 1070 tons; England, 928 tons; afloat for the United States, 560 tons; afloat for England, 465 tons. Deliveries during last month were 1726 tons against 911 in March, 1891. Of this the United States consumed 1176 tons last month against 591 tons in March, 1891, and England consumed 550 tons against 320 in the same time last year.

The *Alliança*, afloat for New York, has 200 tons and the *Advance* 70 tons.

Late cables from Pará quote Islands at 4650 reis, and Up River at 5000 reis with exchange at 11⅛ d. Coarse Islands were quoted at 2950 reis. Receipts at Pará foot up 175 tons. The expected receipts for the month are 1100 tons against 1950 tons in April, 1891. The March receipts at Pará foot 1430 tons against 1530 tons for the same month last year.

Loudon quotations are 34½ d. @ 35½ d. for fine Pará.

The latest New York quotations are:

Pará, fine, new	69-70	Sierra Leone	26-45
Pará, fine, old	71-73	Benguela	48-49
Pará, coarse, new	48-51	Congo Ball	38-44
Pará, coarse, old	51-53	Small Ball	
Caucho (Peruvian) strip	47-48	Flake, Lump and Ord.	27-28
Caucho (Peruvian) ball	54-55	Mozambique, red ball	
Mangabeira, sheet	42-43	Mozambique, white ball	
Esmeralda, sausage	50-52	Madagascar, pinky	53-50
Guayaquil, strip	40-42	Madagascar, black	40-43
Nicaragua, scrap	49-50	Borneo	30-44
Nicaragua, sheet	47-48	Gutta-percha, fine grade	175
Guatemala, sheet	40-45	Gutta-percha, medium	115
Thimbles	43-44	Gutta-percha, hard white	115
Tongues	82-30	Gutta-percha, lower sorts	nominal

Gutta-Percha is in very light supply at high prices with a small demand. There is more doing in Europe where there is considerable activity.

Mail advices from Liverpool give the following statistics and prices at the end of March:

	Tons.	Tons.
Stocks Pará rubber, March 1, 1892	1,081	
Importations in March	610	1,691
Sales and deliveries		687
Stocks, April 1		1,004
Stocks, April 1, 1891, when prices were 3s. 8½d. @ 3s. 9d		766
Stocks, April 1, 1890, when prices were 3s. 3d. @ 3s. 6½d.		892
Stocks, April 1, 1889, when prices were 2s. 9d.		1,075

Business during the month was fair. For Ceará there has been a limited demand at 1s. 10½d.; stocks, 723 bales. In Mangabeira sales had been made at 1s. 10d. @ 2s. 4d. In Peruvians prices were higher. Africans were strong with sales of 300 tons at an advance of 1½d @ 2d. Closing prices were as follows:

Gambia		2s. 2 d.
Sierra Leone Niggers and Twists	11¼d. @	1s. 10 d.
Thimbles		1s. 9½d.
Accra	1s. 9d. @	1s. 9½d.
Congo Ball	1s. 9½d. @	1s. 10 d.
Mixed Ball	1s. 2d. @	1s. 4 d.
Tongues	1s. 3d. @	1s. 7 d.
Salt Pond and Cape Coast	1s. 3½d. @	1s. 9 d.
Calabar	1s. 2d. @	1s. 8½d.
Cameroon		1s. 8⅛d.
Batanga		1s. 6½d.
Liberian	1s. @	1s. 2½d.

* * *

Messrs. Challenor & Co., Liverpool, report to THE INDIA RUBBER WORLD March 31, respecting African rubber: "We have had a quiet market this week, but values are unchanged, and prices paid for some descriptions, principally ordinary Cape Coast, mark a slight advance on last week's quotations. At our auctions, held on the 29th, about seventy tons were offered, but only about six tons were then sold, including Liberian at 1s. 4¾d.; Grand Bassam and Assinee at 1s. 3¼d. to 1s. 5½d., according to quality; Bayin at 1s. 3¾d.; ordinary Cape Coast (for which there was good competition) at 1s. 3½d.; Winnebah at 1s. 3¾d.; and Sierra Leone Twists at 1s. 8½d. per pound. Since the auctions fair sales have been made, including five tons fine Accra Biscuits at 1s. 11d. per pound. Market closes steady."

* * *

In the rubber-goods market generally the conditions mentioned in our last issue still prevail. The redeeming feature in the situation is that phenomenally low prices in most branches of trade have been reached without any serious failures. Bank reserves are very good and there is great ease in money circles. A possible danger may exist in the labor situation, the iron industry being so depressed as to compel heavy reductions in wages. Still rubber-manufacturers are doing well in most lines, and in some directions they are very busy, vainly endeavoring to catch up with orders. In some quarters there is even a disposition to advance prices, the claim being made that it is due to the higher price of crude rubber.

The ability to do this comes from the great demand for goods, and this is the true reason, for rubber was much higher a year ago and no attempt was made in this direction. When a man who places goods on the market finds himself working night and day, he is apt to question very seriously whether his compensation is adequate. It is better to raise his prices than to

[CONTINUED ON PAGE 224.]

NO INJECTION OF AIR

WITH THE

ALPHA

CONTINUOUS FLOW SYRINGE.

FOURTEEN PATENTS ALLOWED.

Brief Claims for the "Alpha" and the "Omega" Syringes.

CONTINUOUS FLOW, with but one bulb.
NO INJECTION OF AIR.
NO FECAL MATTER can be drawn into the tubes.
EASY TO OPERATE with thumb and finger.
NOISELESS, Soft Rubber Sinker.
EFFICIENCY AND DURABILITY GUARANTEED.

MANUFACTURED ONLY BY

PARKER, STEARNS & SUTTON,

FINE INDIA RUBBER GOODS,

Mention the India Rubber World when you write. NEW YORK.

THE CHELSEA WIRE FABRIC RUBBER CO.

THOMAS MARTIN, PRES'T. ALFRED W. FITZ, TREAS. AND MANAGER.

WE MAKE

Mechanical : Rubber : Goods

OF THE BEST QUALITY ONLY.

WE FURNISH

RUBBER BELTING AND HOSE

EITHER WITH OR WITHOUT THE INTERWOVEN WIRE.

Our Wire Fabric Rubber Hose stands DOUBLE the pressure and wears longer than any other Hose made.

Our Wire Fabric Rubber Belt, has less stretch, is stronger and will outlast any Belt to-day on the market.

WE GUARANTEE ALL OF OUR GOODS.

Office and Factory:

968 TO 974 BROADWAY,
CHELSEA, MASS., U. S. A.

Mention the India Rubber World when you write.

Wire Fabric, the dark lines show the interwoven wire.

lower the quality, a temptation that often exists under the circumstances.

The demand for mechanical goods in all lines is large; in view of the quietness of business affairs in nearly every section of the country it is remarkable. Orders for ¾-inch hose cannot be filled. Manufacturing in New England, as well as other sections, seems to be in an active shape, and the call for belting and packing is large. Some manufacturers have advanced prices 5 per cent. There is a good demand for fire-hose, villages and cities replenishing their supply at this season. More garden-hose is being sold in California than for many seasons. There is a good demand for gas-tubing. The demand for bicycle-tires is phenomenal, doubling and trebling. "Pneumatics" are a craze and they are having a great run. The demand for paper-mill goods also continues large.

The rubber clothing trade is variable. Some of the manufacturers are well satisfied, but as a rule there are complaints from the majority. High-priced goods are in particularly slow demand, a mackintosh which sells for $15 going slowly. Jobbers find a better demand for men's goods which sell from $4.50 to $6. This is getting down fast to the price of the ordinary rubber coat five years ago. Light goods are now chiefly in demand and the effect on heavy clothing remains to be seen. Women's grades are jobbed at $9 to $10, but they run down to $3.50 to $4.

The first of April having passed, rubber-shoe manufacturers have begun to deliver detailed orders. It was reported that all the companies would allow 7 per cent. discount to jobbers holding stocks April 1, but this was denied with regard to all but one house. There have been many snows in the West and Northwest, and business was probably very good with retailers, but it is too late in the season for it to have much effect on the jobber. The demand for tennis goods calls for the stereotyped phrase which was employed last year. It can be said that it is broadening, going farther West. Manufacturers are behind in filling orders. The favorite color is black, but brown, white and check goods are very popular. The variation in shapes and styles is large.

The mammoth rubber company which is attempting to absorb nearly all the rubber-shoe concerns has proposed many changes, one being to devote one mill to a certain style, or quality exclusively. The great amount of work required to get all the plants working in harmony will lessen the chances for any radical change in prices this season. Such bodies are handled slowly and to the outsider there will be little show of difference in methods.

All the shoe-factories have had their annual shut-down, which has been abridged this year. All are very busy with one or two exceptions, the demand for labor being fairly more than the supply.

The demand for rubber basin-plugs has been very good within the past few weeks. Their superiority over metal, which is unyielding, is certainly of a pronounced character and architects in putting up new buildings are demanding these goods of the plumber. This demand will probably increase largely until every manufacturer makes and sells them, and then the old story will be told of their being made of everything else but rubber.

The demand for jar-rings has fallen off. The cold snap has raised the doubt that the fruit crop will be of other than average proportions, and with the large orders already given, purchasers are inclined to rest for the present. There is a large demand for faucet-washers, in a local way, due to the finishing of some large and new buildings. Another growing demand is for rubber stoppers for druggists' and other uses.

In druggists'-sundries the demand is becoming slow. Some good export orders have been worked off. Syringes are meeting with good request, and water-bottles are in light demand, as the season of pneumonia and colds wanes. The same holds true for atomizers.

Novelties are in good demand. The pleasure season has not opened, but dealers are anticipating a good business in yachting and similar goods.

In chemicals and oils the markets are of a steady character. In the new combination of rubber factories, the point is made that the white lead trust is making a very large amount of money on its products and the inference is that profits are too large. Some concessions are being made in prices of litharge, but the demand is very steady. The delivery of oxide of zinc is of a most liberal character and prices are very steady. Linseed oil is firm at 58c. for Calcutta. Recent advances have been made all along the line. Since the yielding of the corner in Sicily on sulphur prices have receded 40 per cent.

Prepared Especially for Rubber Manufacture.

BARYTES.	LIME.	TALC.
PUMICE STONE.	PLUMBAGO.	SOAP STONE.
MARBLE DUST.	IRON OXIDE.	INFUSORIAL EARTH.

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Mention the India Rubber World when you write.

THE STOUGHTON RUBBER CO.,
Incorporated 1889. *Capital, $200,000.*
MANUFACTURERS OF
Vulcanized Rubber Clothing,
Vulcanized Gossamer Garments.
Vulcanized Cloth Surface Garments (Mackintoshes), and Rubber Carriage Drill and Duck.
We warrant every article we manufacture Waterproof, Odorless, and not affected by any change in temperature, by which we mean that our goods are warranted not to grow hard or stiff in cold climates, or soft and sticky in hot climates.
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D. C. MARR, President. J. H. COLLIER, Jr., Treasurer.
Mention the India Rubber World when you write.

THE PERFECT RUBBER SHOE.

By a Judge of the Article.

QUITE properly it may be asked at the very outset, What is the perfect rubber shoe? What are its elements? Of what does it consist? Have we it here now with us? And if not, and it is to come, how and by what methods and by what road will it come? It will be the endeavor of the writer not to "prophesy" so much as to place before his readers a group of facts and so direct their attention that they may by reasoning upon them come to their own conclusions, and answer these questions for themselves.

In search of our facts let us go back to the beginning, to the original rubber shoe. What was that shoe? In the first place it was a "pure-gum" shoe; an "all Pará"; an "all fine-Pará" shoe. For quality of material and for durability that shoe will probably never be excelled. Yet it was not the perfect rubber shoe for its faults and defects were many and great. It was too costly. It was too heavy. It was very clumsy and coarse in appearance. It was very elastic and so had to be worn quite a tight-fit in order to be retained upon the foot. This fact made it very uncomfortable and burdensome to the wearer aside from its mere weight and clumsiness which of themselves were great evils. If you take a very light "pure-gum" elastic band and slip it upon your hand tightly enough to have it retain itself in position you can in the course of an hour or two have some conception of how the original rubber shoe affected the foot of the wearer.

It probably will not be denied that if there were a large stock of those shoes now in the open market they would be worth more money (the ultimate test of value of things merchantable) as raw material than as shoes. They would be worth more as material to be manufactured over again into the shoes of to-day, than as shoes. If this is so it is proven that the perfect rubber shoe, the best possible rubber shoe, is not necessarily one composed of the best stock —of the "highest compounds." Probably the perfect shoe will be of "rich" materials, but something else is essential. There must be workmanship of high quality also, and besides this there must be a high degree of specialization—shoes must be differentiated, specialized, adapted to particular uses, and that shoe will be the most perfect which is best adapted by reason of the material of which it is composed, good workmanship, organization, structure and weight—to the use for which it was made. For the lady wishing a pair of "clogs" or "foot-holds" to keep the dampness of the pavement from striking through the thin leather shoe bottom to her sensitive foot, the Pure-gum Hip-Boot is not the best, let it be what it may in quality and workmanship—can we not then conclude, without pressing this matter further, that the best rubber shoe is that which is best adapted to the wants of the people—that its quality must be such that it will give the greatest amount of service for the cost; that such service must be satisfactory to the wearer and in order that it be so the shoe must in shape and structure be best adapted to his wants?

If this be conceded the next question to be answered is: This being the perfect rubber shoe, have we it here now with us? Surely we have many kinds. There are so many shapes and kinds and cuts, sizes and half-sizes—all of some five or six different widths that one is at first of the opinion that if "differentiation" and "specialization" is going to bring the perfect shoe that it ought to be here now with us. It is only quite recently that one rubber superintendent said to the writer, "Do you note how the kinds are multiplying? We are now making over 150 distinct kinds of boots." Another superintendent wrote an article for a trade paper some time since in which he stated that his company (by no means exceptional in this) could make 60,000 cases of goods, any one of which might be called for by any customer any day, without duplicating a case—without making any two cases just alike. It would seem that we have kinds enough now with us, and as for quality of material, there is one company which is now advertising five "distinct qualities" and the buyer is asked to exercise his own judgment as to which quality will give him the best value for his money. The making of at least two qualities is almost universal among manufacturers, and to make them is quite common. Some companies make only one quality—but this is the exception rather than the rule. It would seem from these facts that the manufacturers were furnishing kinds enough and qualities enough, so that it only remained for the public, who alone can finally determine which is the best, to make their own selection and they would then have that shoe, which in their experience was the best; the best so far as cost is concerned and the best so far as satisfactory use is concerned—the two elements of the best possible or the perfect shoe, as we have before determined.

So much for theory. Now how is it practically? Is there a great and solid and universal satisfaction pervading the people on this question? Are manufacturers and jobbers and retailers and consumers of rubber shoes all satisfied? Do they think that we have now with us the perfect rubber shoe? There was one little remark which was copied, I believe in every paper in the Union which evidences to the contrary. "Rubber shoes," said the smart clerk, "are of two kinds, the bad and the very bad." Now one might say that of hats or coats, or leather shoes, and it would fall flat. The fact that when said of rubber shoes it was quoted far and wide all over the country means something. It touched the experience of the many. There was a truth in it which was unanimously recognized. It was not all truth. Rubbers are very often satisfactory —very satisfactory—to the wearer. But there is this thing which must often puzzle the consumer. Because one pair

of a certain brand, style, size and width, has proved so it is not certain that the next pair will. Ask any man what sized rubber shoe he wears and he will tell you he wears from 7's to 9's. Sometimes the 7's are too large and sometimes the 9's are too small. It would seem that the standard of sizes in rubber shops is as elastic as their shoes, and this when one-eighth of an inch in the girth of a shoe will determine not only whether the shoe is comfortable or not, but will also determine whether the shoe will give durable service or not.

What is the trouble? Do not the rubber-shoe manufacturers have a size stick? They do indeed, and they pay a great deal of attention to this matter. But in spite of it all because of matters beyond their control, there is no factory in the country that does not make men's 8's F, both smaller than their 7's F and larger than 9's F (excepting always as to length), and I think the facts will bear me out in saying that there is no factory that does not make their 8's F both smaller than their 7's M and larger than their 9's (length again excepted), and this I repeat, from no cause that they can control. Rubber manufacturers and superintendents may question this statement, but if they will take three pairs of new lasts 7's, 8's and 9's respectively, and place one half pair of each in their heater and leave the other half pair on the bench in their packing room through the month of August next, before they dispute the correctness of it, I have no fear of any contention in the matter. The facts will prove what has been said. Well seasoned lasts have been known to shrink and swell until there was more than half an inch difference in the girth of the two lasts which were originally of the same size.

If this thing is so, and one-half of this difference will make the shoe comfortable or uncomfortable, durable, or to lack durability, is there not good reason for some of the fault that is found with the rubber shoe of the day?

We have laid some stress upon good workmanship as being essential to the perfect shoe, and by workmanship was meant the labor used to build up the shoe. One glance at this matter. Suppose there were two mills making woolen goods, one mill made a specialty of high-grade cassimere, they confined their output to a very few distinct patterns. The other one made or attempted to make every style of woolen goods in the market in two, three, four or five distinct qualities of each pattern. To which mill would you go for a piece of perfect goods? Why should a rubber factory trying to make every kind and style and quality known under heaven succeed where a woolen or cotton or iron factory would inevitably fail?

Perhaps the writer had better here again draw attention to the fact that he is not attempting to prove anything. He is not "prophesying" nor anything of that kind. He is but bringing into view certain facts that have in his mind a bearing upon the question of whether we now have the best possible rubber shoe, and if not, how and by what means that shoe will be improved if it is to become more perfect in the future.

These facts may have force, and they may point in no uncertain manner in a certain direction, but the writer is not responsible for them, neither as creator or as the original discoverer of them. It may follow, from the study of these three facts, and others like them, that the consumers of rubber shoes will be convinced that they are to-day suffering from a state of things which prevents them from having as good a rubber shoe as it is possible for them to have if that state of things did not exist, and yet there may be no blame attached to any one in the matter, and indeed the state of things complained of may be one of the necessary evils and cannot be changed except by adopting that which will increase rather than lessen the evils.

It may be that it is not possible to make a last for a rubber shoe that is as good—all things being considered—as is the wooden last of the present, in spite of the fact that it does not shrink and swell as has been stated; but it neverthless is a fact that if such a last can be found it would be a great step toward perfecting the product of that factory adopting the use of that last, and it is not at all certain that it may not be discovered. It may also be perfectly impracticable to divide up the manufacture so that one factory will have a specialty and make only that particular shoe, leaving other factories to follow the same course, choosing for themselves their own specialty, but it is nevertheless probable (and the consumers of rubber shoes will recognize that probability) that the factory which does this can give to the consumer a better shoe for the money than can any factory that attempts to make all kinds and all qualities.

Is it not a reasonable conclusion from the short examination of the matter which we have been able to make here, that there is room for improvement in the rubber shoe of the future, and that it is quite possible that the consumer may some time hope for a more perfect rubber shoe?

THE FUTURE OF THE TENNIS-SHOE.

By DeWitt G. Ray.

SIN has been described as "an experiment which fails." The tennis-shoe was an experiment which has succeeded. It began with the fostering admiration of the fair sex. Yes, gentlemen, at the outset the girls did it. The first pair of tennis-shoes that I ever saw were worn by a young lady at a lawn party in Utica, N. Y. This is about the impression they made:

Elderly Gentleman—Upper, duck; rubber sole.
Elderly Lady—Quite unusual, on the whole.
Young Gentleman—Very simple, very neat.
Young Lady—Splendid; lovely; just too sweet!

And the last verdict will never be set aside while lawns are green and girls are fair.

So much for the future of the tennis-shoe, *per se*. Hap-

pily for the rubber trade, the apparel for the feet whose title came from an outdoor pastime has bounded out and away from its early environment. The president of a rubber-company in talking about this article of manufacture the other day, said: "Not one pair of tennis-shoes in a thousand is now worn by persons playing tennis." This is not an extravagant estimate. The man who rows, the man who goes yachting, the fisherman, the man who goes to the seashore, the man who spends his vacation in the country, the man who sketches, the man with a kodak, the man who rides a bicycle—all go equipped with the tennis-shoe.

Good to court in,
Good to sport in,
Good to bowl, or roll or plow in.
Good to fence in
And immense in
Country lanes to drive the cows in.

Good to run in,
Good to gun in;
Good to cut and harvest hay in.
Good to hunt in,
Good to punt in;
Good to work or good to play in.

"The tennis-shoe," said a prominent manufacturer, "was the first genuine American departure from the conventional in footwear. It was practically an emancipation proclamation for feet. Men and women who wore them on the lawn did not discard them as soon as their tennis game was ended. Why? Because they were so comfortable. They were so cool, easy and flexible that the comfort which they brought made them desirable and it soon became good form to wear them in any leisure hour. That is how they became fashionable. My grandchildren will not live to see the tennis-shoe discarded."

"The tennis-shoe," said a well-known selling-agent, "has been the most maligned and worst-abused article which was ever placed on the market. I would be ashamed to tell you how it has been debased and debauched. Think of forty cents for a pair of men's tennis Oxfords, a shoe that at its best should cost from $3.50 to $6 a pair. I sometimes think it's a wonder that the name has survived such desecration."

THE INDIA RUBBER WORLD has a friend whose place of business is on Lincoln street, Boston. When I asked him to dictate a sentence regarding the future of the tennis-shoe he replied:

"Why, my dear sir, what's the matter with the present of the tennis-shoe? If I wanted to start a trade journal to-day I would call it *The Tennis-Shoe*. You know, I suppose, that farmers find tennis the best thing for foot-covering in the haying and harvest fields. When you suit the farmers you secure a constituency that is bound to carry you through. Beginning with the farmers you can come up through every grade of employment and nine out of every ten will find comfort and economy in the tennis-shoe. I was in Rochester recently. Going into the dining-room of my hotel I saw waiters moving briskly about but making no more noise in walking than though they had been in their bare feet. They were shod, to a man, with tennis-shoes. I have not seen mention of this in any publication. Many hotels, I understand, require their bell-boys to wear tennis-shoes and it seems to me that they are bound to come into use for nearly every calling where a quiet service is desirable. For outdoor occupations there are seven months in the twelve in which tennis goods now figure prominently and in every line the demand increases steadily. I speak of industrial pursuits, milkmen, messengers, grocer- and butcher-boys and such; and this, you know, is an interest quite independent of athletics. The manufacture of yachting- and gymnasium-shoes is an industry which has developed to great proportions and the handsomest shoe factory in Boston is owned by a firm that make a specialty of footwear for athletes. For outing parties tennis now virtually occupies the entire field. In my new paper, if I conclude to start one, I shall have enough to write about. The poor girl working in a mill and Miss Dainty, the millionaire's daughter; the dude as well as the farmer—all wear tennis-shoes."

To what extent the writer is expected to present his individual views in this connection is problematical. The very full exposition of the plans and purposes of the United States Rubber Co. which appeared in the April number of this publication is still fresh in memory. It seems to me that every advance, every improvement, every point gained by the new corporation in the direction of better rubber goods is, in each instance, a point well scored for tennis-shoes. That the public will be better served by a good wearing article, sold at a living profit, is obvious.

A PLEA FOR STANDARD MEASUREMENTS.

*By James G. Kinne.**

ILL-FITTING leather shoes are instruments of torture, pure and simple, and are recognized as such by humanity in general. The fact that badly-fitted rubber boots and shoes may cause just as much pain and discomfort is not, however, generally appreciated. Manufacturers have spent thousands of dollars in last- and pattern-making with the express object of providing comfortable rubber footwear and yet to-day the small retailer can rarely give his customers perfect fits. When it is considered that nearly every maker of leather footwear introduces his own ideas in the matter of shoe shapes, and changes these constantly to keep up with the general style, it will be seen that the rubber-manufacturer has quite a task before him when he attempts to make "overs" that

* Ex-President of the National Retail Shoe-Dealers' Association.

will fit all shapes. He encounters an endless variety of shapes, styles, widths and sizes. The goods may be "French," "Half-French," "Common-Sense" and "Spring-Heels," with a variety of toe shapes that are bewildering, and still his rubbers should conform to them all. It looks for a moment as if such a thing were an impossibility, and yet, be it said to their credit, the rubber-men come pretty closely to fitting the best of the prevailing styles of leather shoes. As far as following styles is concerned, they are doing all that could be asked of them, but there is one serious deficiency and that is the lack of standard sizes. How much of discomfort comes to the wearer and trouble to the retailer from this lack it is difficult to estimate.

Mrs. Jones, with her daughters, from the city, calls at a country retailer's for B's in leather goods. Countryman fits her with D's, the only width he has. Mrs. Jones is dissatisfied, but as necessity compels, she takes them until she can repair to the city for B's, which may be of the same make, same width at $2 more per pair; only the city retailer (wide-awake) has all widths marked B for cases of emergency. Thus, to please their patrons, retailers throughout the land are having D's marked C's and C's marked B's. Not so in the rubber trade, as there is little uniformity of width and sizes The writer has fitted a No. 5 shoe with a 4½ rubber, while with another manufacturer's goods of the same width it required a 5½ rubber to fit the same shoe. It is therefore possible for a retailer to get from his jobber a full list of numbers, but only a duplication of sizes, which causes him to supply his customer with misfits. It is because of this perhaps that there is a growing demand for cork soles, for porpoise shoes, for oil-grain leather, for anything to avoid wearing rubbers. Can rubber-manufacturers ignore this state of affairs?

Standard last-measurements have been adopted by the leather fraternity; why not an agreement among the rubber fraternity that a No. 4 rubber shall fit a No. 4 shoe, naming dimensions of lasts? There may be a reason for this non-uniformity. It may be that when lasts are long in use they may become ill-shaped and worn so that the shoe made over them at one time differs from that made at another. Wide-awake men will surely some day see this point and act upon it. Surely no expense is too great if it will result in popularizing rubber goods.

The adjustment of standard measurements among rubber-manufacturers appears quite trivial when we consider how few are to be consulted and the change might be made gradually as fast as new lasts were required. In penning this article the writer hopes that the rubber-manufacturers may see that it is to their interest to add comfort to the ordinary wearer of rubber shoes and by simplifying the method of manufacture may ease the burden of his brothers the retailers.

INTERVIEWS WITH THE RUBBER-SHOE TRADE.

By "India Rubber World" Correspondents.

THE rubber-shoe trade in Boston, judged from the expressions of some of the leading dealers interviewed by THE INDIA RUBBER WORLD, is in a normal condition, healthy without being over brisk, with prices ruling lower than a year ago. Mr. J. B. Horton, of the firm of Henry H. Tuttle & Co., says that the trade of the year 1891 was up to the average, although the winter was hardly as favorable as dealers hoped. Lighter makes of rubbers were most in demand, and in this line there is no excess of stock on their hands.

"There is a marked demand for the better class of goods," he said. "Prices are reduced on some grades, and of course that pleases the retailers, but specialties remain about the same. The new lists are satisfactory in the main. Tennis-shoes are in constant demand here from early spring to late fall, especially among fashionable young people of both sexes. Boys take to them very kindly, and there is no doubt they will be more popular this season than ever before, for vacation wear and for use in the country and at the sea-shore."

Speaking of the suggestion made in some quarters that manufacturers would do well to adopt a system of standard sizes in rubber footwear, Mr. Horton said that his firm felt no demand for such a system.

Mr. E. H. Paine, Boston agent of the American Rubber Co.'s boot-and-shoe department, when questioned regarding the trade of the past year, said that the volume of trade compared favorably with that of previous seasons, but the prices obtained were rather low. Competition had forced the manufacturers to issue a price-list this spring which, while satisfactory enough to retailers, could hardly be considered equally satisfactory to the manufacturers. There was, he asserted, an increasing demand for goods of the better grades, and tennis-shoes promised to be as popular as ever during the hot spell of 1892.

"No wonder the tennis-shoe is a favorite with all classes," he added, "for it is a good shoe, comfortable and inexpensive. There are a great many people South who wear the shoe, although they are not tennis-players, and to a certain extent the same thing is true of a host of young people in our own section."

In Mr. Paine's judgment the proposition that manufacturers take measures to secure a system of standard sizes this year on rubber boots and shoes was not likely to create any stir. There was no pronounced desire for such a system, inasmuch as the variations now are comparatively slight, and the general public is not making any loud calls for a change.

At the big general store of Jordan, Marsh & Co. an immense quanity of rubber footwear is handled annually, and Mr. Phinney, who has charge of this department, gave a brief summary of the state of the trade, saying that he considered the past year a very fair one, despite the fact that there was very little snow until late in the winter, and

the sale for that quarter of the year hardly toed the mark. "I think most of the retailers find themselves disappointed with the trade on heavy goods," said he, "but light-weight overshoes have been lively sellers."

When asked how the spring price-lists suited him he said that they were as good as could be expected. Some prices had been reduced. "Of course anything in the way of lower prices suits the dealers," he said, "and the price-lists are satisfactory to the extent that they give us reduced quotations. There is very little sale for the poorer grades of rubbers. The second grade is handled less, in my opinion, year by year, and first and third grades, with the first largely predominating, are favorites on the market. Our sales each year in the line of tennis-shoes are steady. There are many players in this vicinity, and most of them wear a complete outfit when engaged in the sport. I don't see how the rubber manufacturers can adopt any standard of size to advantage. In fact I believe it is better for them not to do so. There are so many variations in leather goods, that they cannot attempt to follow them, and after all it is only on light goods that a close-fitting overshoe is required. On heavy goods, such as boots and arctics, a quarter or even a half size variance doesn't matter much. Light rubbers are pliable and conform to the shoe readily, so there is little ground for complaint in that direction."

PHILADELPHIA.

TAKING three of our leading rubber boot-and-shoe houses as criterions, the last season was only a fair one and the prospects for the coming one are not any too glowing. The weather during the past winter was not good for the trade and it was only in the lag end of the season that good business was done. Dealers, that is retailers, in this city are fairly well stocked and in the country, especially the western portion of this State, where the weather has been a great deal more severe, the prospects of good orders are good. The trade in this city and vicinity demand good goods, though they want them as cheap as possible and the majority are in favor of a uniform size from the makers.

Messrs. Grieb & Co., one of the largest rubber boot-and-shoe houses in the Quaker city said: "Ninety-one was a bad season all through; the weather played havoc with the consumption and altogether it was exceedingly unsatisfactory. The coming season can hardly be judged as yet, it being a little too early and we have made no effort at all to sound the trade. The new prices have proved very satisfactory and we would like to see them maintained, but it is hard to say whether they will be or not. The tendency seems to be for a cheaper grade, and we find there is more call for the third grade of rubber shoes, especially, in this city and surrounding country. In regard to retailers being well stocked, we think that they are, in this city, carrying over quite a quantity of goods, but in the upper portions of the State the weather has been more favorable for the business and they are pretty well cleaned out. The future of the tennis-shoe is for a cheaper stock, and a fair quantity have been sold. The desire of the retailer, we find, is for a standard size. The majority of the makes run wider—a three in one make fits a five in another, making it very hard on the seller."

Around the corner, on Commerce street, Mr. Miller, of the firm of Luther & Miller, said:

"The season of 1891 with us was only fair, bad in the earlier winter months' but good rubber weather in January and February helped to make up an average season. The prospect for the coming season is yet rather hard to define. Some amount of early business has been done but prices show no advancement and the trade do not care about buying or laying in a stock too early. The recent new prices are entirely satisfactory to retailers, but they are the lowest ever known in the trade and only afford a fair margin to dealers. The demand in Philadelphia is always for good goods and we may say the same for the entire State of Pennsylvania, but they want the makes as cheap as possible. The retailers about this section are, I think, pretty well cleaned out, the business in March being far superior to any other month. About the tennis-shoe, it seems the trade sell more every year, but whether there will be any change in sentiment I cannot tell. There are more inferior goods made in this class than in any other branch of the trade. About the desire of the retailers for standard sizes I cannot exactly say as we do not come in sufficient contact with them to reply definitely. As for the new rubber combination, I think that if it embraces all the companies prices could be well controlled, but if two or three companies are not in, it will have no influence on prices in any way or form."

Mr. James T. Graff, of the firm of Graff, Son & Co., is a good authority on the retail end of the business, though the firm is not a retail one by any manner of means. He stated that the retailer is not well stocked up and there ought to be quite a big demand for rubber boots-and-shoes for the season of 1892. The shop-keepers do not say much about sizes though the impression is that shoes should be marked one-and-a-half sizes larger than the leather shoe; for example, a No. 5 should be marked No. 6½; it would make the rubber last longer and give greater satisfaction to the wearer. A large proportion of the consumers do not buy them large enough. The retailers are seeking better goods but the prices are no better, in fact being exceedingly low. The cheaper qualities are not being sought after to any great extent. Those who do keep large stocks of cheaper and inferior goods don't do much with them until way up in the season say, December, January and February.

A. B. A.

OMAHA.

THAT the rubber boot-and-shoe trade for the past season was unprecedented is the unanimous opinion of the dealers in that line of goods in this city, and they are likewise of the opinion that the outlook for the present season is along the line of a still larger increase. The six jobbing-houses handling rubber footwear in Omaha did a business last year aggregating nearly $1,000,000, which was about 25 per cent. in excess of that of any previous year, and they expect to do a business of $1,250,000 in 1892. While the winter was not an unusually hard one, it was, nevertheless,

of sufficient severity to make glad the hearts of the rubber-men, and coupled with an excessively wet and very backward spring, was a potent factor in bringing about the depletion that exists in the stocks of both wholesale and retail dealers. Low prices are also assigned as one of the reasons for the remarkable trade that has been enjoyed, and it is confidently asserted that while they have never before been so low, they will never again be so near "bed-rock."

Without exception the testimony of the dealers is to the effect that the tendency of the demand is decidedly in favor of a better quality and higher priced class of goods. There is scarcely any sale for second-class goods, the demand being for either a No. 1 article or something no better than third-class, whereas a short time ago it was all second- and third-class. It is believed that the improvement in the quality of the goods turned out by the factories has had much to do with this change, by educating the general public and practically demonstrating the great advantage of a good article over a poor one, and, this, too, on reduced prices, so that as a rule the only individuals who will buy a cheap rubber to-day are those who fully expect to lose the article before they get home from the store.

Mr. Charles A. Coe, of the recently consolidated Morse-Coe Company, expressed the belief that the prices that recently went into effect will give general satisfaction. He is thoroughly satisfied with the outlook, although business thus far this season has been very light. He attributed this to the feeling of uncertainty pervading the retail dealers, as to what changes in prices are to follow. There seemed to be a feeling that further cuts were to follow, and the retailers were holding off to take advantage of them. Retail stocks he knew to be very low—in fact, almost nothing. Mr. Coe expressed firm faith in the future of the tennis-shoe, which is rapidly growing in popularity, although it has not yet been introduced in this section to the same extent as in the East He found a general desire among retailers for a system of standard sizes in rubber footwear, as it would simplify matters to a great extent.

Of the recently-organized United States Rubber Co. Mr. Coe professed to know nothing but what he had read in the newspapers. When it was first given out that such a combination was being organized he had written to two prominent rubber-men inquiring about the matter, and they replied that they knew nothing whatever about it. In a few days he saw in the newspapers that they were both directors of the new company. As to the result and the effect upon prices, Mr. Coe said he believed that prices could be controlled if matters were properly handled, but the difficulty always had been that some one wanted to take an undue advantage and the others naturally "kicked over the traces." He believed that if all the factories went into the combination and it was properly managed it would be a permanent thing.

Mr. F. P. Kirkendall, of Kirkendall, Jones & Co., felt well satisfied with the business of the past year and the prospects for the present. He said he had heard little of late regarding the adoption of standard measurements, but believed that it would be better for all concerned and that it would give very general satisfaction.

Mr. Z. T. Lindsay is a rubber-man who did claim to know something about the rubber combination and he did not hesitate to express the opinion that it would prove to be of advantage all around. Some of the factories at least had been losing money, and he expected therefore to see an advance in prices. He did not believe that it would be a very radical advance, as such a move would be certain to defeat the very purpose for which the combination was entered into, as in that event there was enough money lying around loose to start another big factory. If they acted reasonably he believed that the United States Rubber Co. could control prices, and the fact that two companies were outside he thought would cut no figure, as one, at least, was not disposed to cut prices. Mr. Lindsay expressed doubts that the rubber-shoe factories would be able to supply goods fast enough this year, as there are but sixteen of them and the stock on hand is very low, while the demand is constantly increasing.

Though the tennis-shoe trade was in some respects peculiar, Mr. Lindsay was satisfied that it must remain a permanent feature of shoe stocks. The season opened all at once and ended the same way. In season it was impossible to supply the demand and out of season the goods could scarcely be given away. Continued wet weather had delayed the season this year, but two or three pleasant days would bring it out full-blast, and every retailer would begin "kicking" because not supplied on the instant.

CONDITION OF RUBBER FACTORIES ABROAD.

THE business report for 1891 of the United Berlin-Frankfort India-Rubber Goods Factories in Berlin and Gelnhausen is of an encouraging nature. The management state: "The hopes which we indulged in at the close of the preceding year have been amply fulfilled by the balance which we are now enabled to show. In spite of the retrogressive tendency in all branches of industry, our trade has continued to increase, partly on account of the well-merited popularity everywhere extended to our products, and partly because of the strenuous efforts which we have made to extend our custom. There was a great rise in the price of the raw material last year, during the first five months to an almost unheard-of height. We should therefore be all the more pleased that the final results of this year's work have been so much better than those of the preceding year, although we have been suffering under such great disadvantages.

"The rough gain for the year was estimated at 192,901 marks against 184,862 marks in the preceding year. Of this amount the sum of 55,316 marks is to be carried forward, so that there remains a surplus of 137,585 marks as clear profits. Of this the shareholders obtain 60,000 marks as a

5 per cent. first dividend; the tantième gets 12,475 marks; there therefore remains a sum of some 65,100 marks to be disposed of. This amount it is proposed to deal with in the following manner: 36,000 marks as a super-dividend of 3 per cent., so that the shareholders obtain an 8 per cent. dividend altogether; 15,000 marks are to go to the extra reserve fund and 14,000 to the new reckoning.

"We have entered upon the current business year with plenty of orders in our possession and the trade during the first three months has again risen, when compared with the same period of last year. We have endeavored to extend the area of our trade in every possible direction, in order that the damage done to the home industry may be in this manner compensensated for as much as possible. During the past year we have only maintained our position in the Austrian trade by making considerable sacrifices, in the hope that the alteration in the duties brought about by the commercial treaties would facilitate the importation of our products into the countries concerned.

"The German-Austrian commercial treaty, which was concluded at the end of the year 1891, has not conferred any great benefit on our industry up to the present time, in consequence of which we considered it better to acquire for ourselves an India-rubber factory in Bohemia and conduct operations from there. We are enabled to do this more easily seeing that the conditions of the trade have been fixed by the commercial treaty for many years to come. We are firmly convinced that by this action we have greatly contributed to the future prosperity of our business. Of course for practical results some short time must be allowed in order that the factory may get into good working order.

"Although we are not able to make any reference as yet to the productive capabilities of this factory, yet we may be fairly allowed to give our opinion as to what the future of the same should be. Our manufactures, it must be remembered, are already well introduced in Austria, and we have already established a firm and solid business connection there, so that the same trade may be surely counted on for the newly-founded factory, since it may be taken for granted that our manufactures will still retain the same excellent properties which have made them everywhere so popular.

"That trade which has therefore passed from the factory in Gelnhausen to the newly-established factory in Grottau, must be sought for elsewhere. To our satisfaction we have heard that the former factory is already fully employed. We are therefore allowed to promise our shareholders a satisfactory result for the current year, just as we did at the commencement of the year which has just gone by."

THE Cologne *Gazette* gives a description of a large India-rubber factory in the Rhine district, adding some information regarding the condition of the rubber industry in Germany. It is stated that while in general the duties on rubber manufactures have been regarded as sufficiently protective in extent, they have not prevented some serious inroads by foreign competitors. The trade in rubber belting, in particular, is said to have suffered severely of late under American competition. Another cause of complaint is the effect of tariff legislation in neighboring countries, which serve to restrict German exports. It is mentioned that Switzerland, which has contained practically no India-rubber factories, is now developing this industry under the stimulus of recent legislation. It is feared that the result will be to preclude all further possibility on the part of German manufacturers of carrying on the rubber trade with Switzerland.

THE India-rubber and asbestos factory of Alfred Calmon, in Hamburg, is described by *Kuhlow's* as one of the most important industrial establishments in Germany, since its products meet a world-wide demand. The factory employs 180 men and is devoted chiefly to the manufacture of steam-tight appliances, including packing and steam-hose. A specialty is a steam-hose with indestructible wall of asbestos, the lining being of pure asbestos cloth. Mr. Calmon is now busying himself with the production of a new grade of belting.

THE India-rubber factory of Voigt & Winde, a joint-stock company at Berlin, at the general meeting of stockholders on March 16, voted to reduce the capital from 1,200,000 marks (practically $300,000) to 1,000,000 marks (or $250,000) by the repayment to shareholders of the amount of the reduction.

RUBBER FACTORIES IN FRANCE.

[WRITTEN FOR "THE INDIA RUBBER WORLD" BY A FRENCH MANUFACTURER.]

THE India-rubber industry was not introduced into France until 1830—several years after its establishment in England and America—and to-day it is still less important here than in those countries. The manufactures are principally of mechanical and surgical goods, for the reason that the demand is comparatively small for rubber garments and shoes. The principal firms are the Compagnie Generale des Telephones, Guibal and Menier, in Paris; Hutchinson & Co., of Montargis, and Michelin, of Clermont-Ferrand. There is also in the neighborhood of Paris a factory belonging to the India-Rubber, Gutta-Percha and Telegraph Works, Limited, of Silvertown, (England). All these concerns make mechanical rubber-goods and two of them (Guibal and Hutchinson) make clothing and shoes. For a few years past there has been in France a company manufacturing submarine cables, a class of goods formerly imported. Besides these large concerns there are a number of less important ones, mainly in or near Paris, Rouen and Lille, engaged in making mechanical goods and such specialties as dolls, toys, balloons and surgical goods. The Paris city directory names no fewer than ninety-five rubber firms, but without distinguishing between manufacturers and dealers.

The rubber-manufacturers of France are obliged to compete with the exporters from America, England, Germany and Belgium. Generally the importations from America are high-priced goods of grades which native manufacturers are not prepared to supply. Belgian and

German goods are commonly ordered on account of their cheapness. English rubber goods are regarded as approximately equal in quality and value to the French.

Rubber goods of all descriptions are less generally used in France than in some other countries. Rubber-manufacturing here cannot be compared, therefore, with the same industry in the United States or Great Britain. For instance, rubber shoes and coats are in many parts of France superfluous articles, while in the other countries they are in general use. This explains why French manufacturers have not felt urged to improve their machinery in the same measure as is true in America. There has been no necessity for production on the immense scale of their foreign rivals. Most of the factories here have in use the same machinery employed at their foundation. Nevertheless the export of French rubber goods to foreign countries and to the French colonies is already of some importance and is on the increase. Much of the work in rubber factories is still done by hand, at a very low rate of compensation. Forty cents per day is a common rate of wages. Within a few years, however, a tendency has been shown to give up this system, and to introduce machinery to a greater extent. Some of the smaller concerns are going out of business on account of the cost of the machinery needed in order to enable them to meet the new conditions of the industry. The new duties on imports will enable French manufacturers to equip themselves better in this regard. American makers are excelling in the number and quality of their machines for facilitating the production of rubber goods.

The crude rubber used by French manufacturers is bought principally in London, Liverpool and Havre. Rubber from the Dutch East Indian colonies is bought in Amsterdam and West African rubber in Antwerp. Pará rubber is, as a rule, a little dearer than the same grades in the United States.

NOTES ON RUBBER-TREE CULTURE.

NO basis of fact seems to exist for the statement copied from a Washington newspaper in our last issue, relative to "Rubber-Tree Culture in Florida." The statement referred to was that experiments in this direction were to be made on a large scale by the direction of the Secretary of Agriculture. In response to a letter of inquiry addressed to the Department of Agriculture the following has been received:

TO THE EDITOR OF THE INDIA RUBBER WORLD: Yours of April 1 to the Secretary, calling his attention to a newspaper rumor stating that this Department is to undertake experiments in the cultivation of the rubber-tree in the Everglades of Florida, and asking that a statement of what is intended to be done should be furnished you for the readers of your paper, is at hand. This department is making no attempt at the introduction of the rubber plant in Florida, nor is one contemplated, because the rubber-tree is a strictly tropical plant, and while it might live on some of the Keys of Florida, it would not likely, in the opinion of our Horticulturist, yield a commercial product in any portion of that State. Very respectfully,

EDWIN WILLETS,
Assistant Secretary.

Washington, D. C., April 22, 1892.

THE Mexican Minister at Washington, Señor Matias Romero, having furnished THE INDIA RUBBER WORLD last month with some account of his planting India-rubber trees in Mexico, was requested to supplement it with a report on the present condition of the plantation. In response he writes:

TO THE EDITOR OF THE INDIA RUBBER WORLD: In regard to your desire that I add to my article a few observations on the present condition of my plantation of rubber-trees, and the date at which a profitable yield of gum is looked for, I have to say that having been obliged to leave Soconusco since 1875, and being unable, therefore, to look after the plantation, which has been mostly abandoned, I do not know what is the present condition of the trees. All I have heard is that the trees grew rapidly and that the persons who reside near the same have obtained some gum from the trees. I am very respectfully yours,

M. ROMERO.

Washington, D. C., March 29, 1892.

EARLY in the year some mention was made in this journal of the organization in the Mexican State of Sinaloa of a company for the planting of rubber trees. The following letter is a part of the correspondence which has resulted from the publication:

TO THE EDITOR OF THE INDIA RUBBER WORLD: I have received your favor of February 20, in which you ask me for some information in regard to the company organized in this State devoted to the cultivation of rubber. In reply I beg to say that the principal shareholders are E. Batiz & Co., of this city, and Jesus Escobar, of Mazatlan. The company propose to invest $20,000 in this business and they have taken possession already of 498 hectáres [about 1270 acres].

This is all the information I am able to give you just now, because the company have not been organized yet, but I will give you further information as soon as it may come to my knowledge. Yours very truly, LUIS F. MOLINA.

Culiacan, Sinaloa, Mexico, April 2, 1892.

Profits of a German Rubber Factory.

IN a report on the condition of the Continental Caoutchouc and Gutta-Percha Factory, in Hanover, the German newspaper, *Kuhlow's*, states that the year 1891 was a very successful one for this company, in spite of the high price of coal, and although the selling price of the manufactured article was considerably reduced. These disadvantages, however, were more than compensated for by an increase in the trade. The clear gain amounts to $89,910.92 ($91,902.98 in 1890). The manner in which this sum is to be disposed of will only be settled at the chief meeting. In any case there will be a dividend of 27 per cent. declared as in the preceding year, which means $63,834 to be divided among the shareholders. Of the rough gain of $115,149.39, $7140 will be placed to the account of the reserve fund and $16,670 will be carried forward. For improvements the direction have decided to devote the sum of $5286.69.

THE CHEMISTRY OF RUBBER INGREDIENTS AND ADULTERANTS.

*By Henry J. Williams, Chemist.**

III.—LITHARGE, RED LEAD AND WHITE LEAD.

WE shall now consider the characteristics and properties of litharge, red lead and white lead, which play such important parts in the manufacture of rubber goods.

Under certain conditions metallic lead has a very strong affinity for oxygen; this is shown by the fact, which is not generally known, that this metal, when very finely divided, takes fire spontaneously on exposure to the air and burns, being converted into oxide of lead. Lead forms four compounds by combination with oxygen, the suboxide Pb_2O, protoxide Pb O, sesquioxide Pb_2O_3 and peroxide PbO_2. The protoxide and the mixture of protoxide with either the sesquioxide or the peroxide are of importance in the arts. The protoxide occurs in two forms called respectively massicot and litharge, both of which can be fused and which in that condition serve as the main constituent of the lead glazes of pottery. When molten lead is exposed to an oxidizing atmosphere; *i. e.*, when a current of air is made to pass over the surface of the melted metal, and the heat maintained is somewhat below the temperature of fusion of protoxide of lead, the latter is obtained in the form of a yellow powder called massicot. Litharge, the other form of protoxide of lead, is made on a large scale by the direct oxidation of metallic lead, but at a very much higher temperature than that used for making massicot, for the protoxide, as fast as it forms, fuses and flows, in a melted condition, into a receptacle where it solidifies. Litharge is obtained in very large quantities in the process of cupellation, or purification of silver from lead; here the operation is sometimes conducted merely to get the litharge, the silver being a by-product, while in other cases the litharge is the by-product of the refining of the silver.

By whatever method it is obtained, the resulting litharge is yellow or reddish according as the cooling has been rapid or slow. It is composed of minute scales which have a soft feeling somewhat like talc, forming together a decidedly heavy powder with a specific gravity of 9.36 at 4° C. and assuming on heating a brownish red tint which turns pale yellow again on cooling.

Minium or red lead, as ordinarily made, is not of constant composition; it is generally represented by the formula Pb_3O_4 where it may be regarded as a compound of the protoxide with the sesquioxide Pb O, Pb_2O or of the protoxide with the peroxide 2 Pb O, PbO_2. It is prepared on a large scale by first oxidizing metallic lead to massicot, which is then ground and levigated, the resulting fine powder being then exposed to an oxidizing atmosphere for forty-eight hours on the hearth of a reverberatory furnace, at a temperature of 475° to 750° F. (300° to 450° C.).

Great care is taken to stir frequently and to prevent the temperature from rising sufficiently high to cause the mass to fuse and cake. The protoxide of lead absorbs from 1½ to 2 per cent. of oxygen and is converted into a beautiful red or orange red powder which finds frequent use in making some kinds of red rubber goods. When prepared from a very fine carbonate of lead or from white lead, it has generally an orange tint, owing to its fine state of division.

All of these oxides of lead dissolve to a slight extent in water so that imperfectly mixed rubber goods which contain them, and even the best made, may yield, on boiling with water, considerable quantities of lead in solution. Such goods, therefore, are not to be used in making objects such as cups, toys, etc., which might come in contact with food or be placed in the mouth, as they are liable to cause poisoning.

In the process of cupellation silver is extracted from lead by exposing the melted argentiferous lead to the action of a blast of air, at a temperature above the melting point of litharge. The lead is converted into litharge while the less oxidizable silver remains unaffected. The operation may be performed in a variety of ways, but the most prominent systems are the German and the English.

The German cupelling furnace consists of a large shallow hearth, somewhat elliptical in shape, about eight or nine feet in diameter. It is made of marl, or a mixture of limestone and clay, firmly stamped down, but retaining a certain degree of porosity and absorbent power for the molten litharge. At one side is a fireplace for either coal or wood, and at right angles to it are the nozzles, generally two in number, for supplying the blast. Nearly opposite the blast and near the fireplace there is an opening for the removal of the litharge.

The bed or hearth of the furnace, which is very large for such work, and upon which a much heavier charge can be worked than by any other similar process, is covered by a dome-shaped top or roof which can be lifted off and on. It is let down and luted on when the operation is about to begin. From 35,000 to 37,000 pounds of lead are treated at one operation, of which 13,000 pounds are introduced in the form of pigs at the beginning, and the rest after the litharge has begun to flow. As soon as the pigs first introduced are melted the surface of the charge becomes covered with a dark crust, called *Abzug*, consisting of the oxides of foreign oxidizable metals and other impurities in the lead, together with small particles from the hearth. This crust is skimmed off through the working door and the surface of the metal exposed. The fire is then kept up so as to maintain the lead at a dark red heat while the impurities cease to separate in the form of scum. The first litharge which forms is pasty and contains largely the

* Member British Society of Chemical Industry, Deut. Chem. Gesell., and Am. Inst. Mining Engineers.

impurities in the lead, chiefly antimony. This product is called black litharge or *Abstich*. At the end of two hours the formation of the pure litharge begins, the temperature being kept up to a cherry red heat until the operation is complete. The litharge is allowed to flow from the hearth, as fast as formed, by cutting notches in the marl, of which the hearth is composed, the molten litharge being received in iron molds. In these the interior of the mass cools the more slowly and generally has a red color, which is preferred.

The yellow litharge is separated from the red and for the most part reduced to metal in furnaces by itself. Towards the close of the cupellation, just before the last portions of lead are removed from the silver, a beautiful appearance, known as the fulguration of the metal, is noticed. During the early stages of the operation the film of lead oxide is continually being formed and this is renewed as rapidly as it is removed; but when the lead has all been oxidized, the film of litharge becomes thinner and thinner, and as it flows off, a succession of beautiful iridescent tints due to the color of thin films (Newton's Rings) are observed. After a few moments the film of oxide disappears altogether and the brilliant surface of the molten metallic silver is seen beneath. The litharge which forms during the latter part of the operation contains considerable silver and is saved by itself and smelted anew to obtain the silver in the next lot of lead.

The cupellation of large quantities of lead at one operation is especially adapted to those cases where the lead is quite impure, for all the foreign matters are then removed in the *Abstich*, the litharge subsequently formed being pure. In Freiberg, Saxony, where the amounts mentioned above are cupelled at one operation, there are formed 400 to 600 pounds of *Abzug*, but no *Abstich*, as the lead is previously refined. Thus from 33,000 to 35,000 pounds of litharge, and 520 to 530 pounds of silver are obtained, the loss of lead being in the neighborhood of 8 to 10 per cent.

The English process differs from the German in having the cupel or hearth, upon which the oxidation takes place, movable, the lead being added at intervals. The hearth consists of an elliptical frame of wrought iron 5 feet long by 2½ feet wide, filled with moistened bone ash, firmly packed down and then scooped out to the depth of about three inches. This cupel or "test," as it is sometimes called, is wedged into place in a reverberatory furnace with a large fireplace at one side of the ellipse. At one end there is a nozzle to supply the blast, and directly opposite, at the other end, a flue to carry off the lead fumes; here, too, there is a notch to run off the litharge. The test having been previously heated, melted lead is poured into the cavity in the bone ash and oxidation at once sets in. A constant supply of lead is furnished by gradually protruding pigs of lead through openings at the back of the furnace. In this way some five tons of argentiferous lead are converted into litharge and run off, with a loss of lead said not to exceed 5 per cent., leaving 200 or 300 pounds of lead, very rich in silver, upon the hearth. The litharge is tapped through the notch as fast as formed.

Commercial litharge generally contains carbonic acid gas and water, both absorbed from the air; these impurities may be removed by ignition. Not unfrequently, it contains also small quantities of iron oxide and copper oxide. None of the impurities, however, are generally present in sufficient quantities to cause trouble in rubber. As a rule, if the litharge dissolves completely in glacial acetic acid after heating, and with but slight effervescence, it may be deemed free from objectionable adulteration.

Red lead, or minium, is sometimes adulterated with oxide of iron, red bole and brickdust. These substances remain undissolved when red lead is digested in warm dilute nitric acid, to which a little sugar or alcohol has been added. The residue may then be tested directly for the impurities and these identified. The normal lead carbonate, $Pb\,CO_3$, which is just as good to use in rubber as white lead, may be formed by precipitating a cold solution of lead acetate by means of carbonate of ammonia, or by passing carbonic dioxide through a dilute solution of sugar of lead. It is a soft, white, heavy powder not unlike white lead in appearance, but somewhat more dense.

Lead forms several basic carbonates, among which white lead is the most important, since it is manufactured on a very large scale. In the pure state this compound consists of hydrate of lead $Pb\,O\,H_2$, with from two to four molecules of carbonate of lead. The generally accepted, but somewhat variable, formula is $2\,Pb\,CO_3$, $Pb\,O_2\,H_2$. The oldest process for the manufacture of white lead and the one which gives the best results, is known as the Dutch process. In this process, earthenware pots about eight inches wide and ten high, with perforations in their walls near the top, are filled to one quarter of their depth with vinegar containing about 3 per cent. of acetic acid. The pots are so shaped that at one third of their height from the bottom there is a shoulder projecting inward upon which some eight or ten thin buckles of metallic lead, cast in a variety of shapes, can be laid. The pots are then placed under a shed, in rows and layers upon horse dung or moist spent tannery bark, covered with boards upon which more dung or tan is placed and upon which another layer of pots in rows is placed, similarly covered with boards and with tan. In this way some twenty to thirty layers of pots, placed one above another, and numbering 2000 or 3000 pots in one pile, may be stacked up, the whole pile being finally covered with tan. Air circulates more or less freely through this porous material and causes the tan or dung to slowly decompose; much heat is thus developed, which assists the evaporation of the vinegar and corrosion of the lead, with formation of the basic lead acetate. The latter, coming in contact with the carbonic dioxide formed by the putrefaction of the organic matter of the pile, is slowly converted into white lead, the basic carbonate. In the course of from four to five weeks the greater portion of the lead is thus converted into white lead, the change taking place from without inward.

The white lead is then detached, ground into a fine paste while moist, washed well to free it from adhering acetate, and finally dried, either in small round pots or upon long

pans 75 to 100 feet long, heated beneath by steam. Unwashed white lead contains a considerable quantity (from 2 to 12 per cent.) of acetate of lead.

According to the German method of manufacture, plates of lead are hung up in wooden boxes placed in heated chambers containing a stratum of acetic acid, or the plates are suspended in heated chambers having their floors covered with tan and acetic acid.

Both the French and English methods, where carbonic dioxide is passed through a solution of basic acetate of lead, obtained by boiling a solution of acetate of lead with litharge, yield products which would answer every purpose for rubber work but which possess less covering power than the Dutch white lead.

Another method which yields a white lead of excellent covering power is the process patented by Dale and Milner. This consists in carefully grinding between millstones a mixture of litharge or any insoluble basic lead salt with water and bicarbonate of soda. Milner has improved upon this method by grinding a mixture of four parts finely divided litharge with one part of common salt and sixteen parts of water. After about four and a half hours the reaction is complete. The mixture of basic lead chloride and caustic soda is then brought into a leaden vessel, well stirred with a wooden pestle and a current of carbonic dioxide passed through until the liquid is neutral. If the carbonic dioxide is passed in too long the product is spoiled. White lead is a white, earthy, heavy, amorphous powder, very opaque, which appears under the microscope to consist of round transparent globules of the size of 0.00001 to 0.00004 of an inch in diameter. White lead is very often mixed with baryta (heavy spar) and gypsum; quite frequently also with zinc oxide. The amount of the admixture with baryta or gypsum can readily be determined by treating a weighed portion of the powder with glacial acetic acid, when barium sulphate and nearly all the gypsum remain behind undissolved. The dissolved lead may then be thrown down as sulphate by adding dilute sulphuric acid to the solution and the zinc determined in the filtrate from the lead. The estimation can be approximately made in a still more simple manner by igniting a weighed portion of the white lead and heating to the point of fusion in a porcelain crucible, and then weighing the residue. White lead loses in this heating the whole of its carbonic dioxide and of its water, leaving lead monoxide behind. From the loss of weight, therefore, the percentage of mineral impurities can readily be calculated for an average sample of white lead should lose 14 per cent. of its weight by ignition. If, therefore, a sample loses less than this weight by ignition, it is easy to calculate how much pure white lead it contained, in other words how many fourteenths of 100 are white lead, the rest being adulterants.

RUBBER AUCTIONS AND F. H. NAZRO—II.

By DeWitt G. Ray.

PRESIDENT NAZRO, of the Boston Boot and Shoe Club, conducted one auction sale of rubbers which, more than any other, won for him a national reputation. The date of this sale was June 7, 1877, and the location Nos. 18, 20 and 22 Pearl street. If such an assemblage of merchants should be seen in Boston to-day the trade papers would enjoy a sensation of the first magnitude.

Fancy S. A. McClung, of Louisville, Ky., walking in and shaking hands with C. B. Heffelfinger, of Minneapolis. Imagine Mr. Hecht, of San Francisco, meeting Mr. Keiffer, of New Orleans. Think of E. S. Beals, of Milwaukee, eating lobster salad with C. J. Brown, of Atlanta. And when Fred Nazro introduced Messrs. Smith and Forbes, of North Carolina, to Mr. Dunham, of South Carolina, does any one believe that the traditional remark of the Governor of North Carolina to the Governor of South Carolina was forgotten? We know Mr. Nazro too well to harbor such a thought.

On that June day, fifteen years ago, Moses D. Wells, of Chicago, met A. D. Brown, of St. Louis. R. P. Smith, of Illinois and R. S. Payne, of Knoxville, Tenn., shook hands under the folds of that red flag which Johnson, Moody & Co. had unfurled on Pearl street. W. F. Thorne came from Cincinnati to find at this truly national convention Messrs. Gans & Klein, Helena, Mont., Mr. Wood, of Hobart, Wood & Co., and the Einsteins, of San Francisco crossed the continent to listen to the words of Nazro and to profit by his remarks. The tall, soldierly form of C. H. Fargo, of Chicago, was seen shoulder to shoulder with that of A. J. Cammeyer, of New York. The delegate from Utica was the genial and courtly Edward A. Tallman, while Syracuse was represented by the energetic S. B. Thing. W. C. Walker, of St. Louis, and S. Friedman, of Memphis; Mr. Graaf, of Philadelphia, and G. W. Gray, of Hartford, also sat down to the $1000 banquet mentioned in the article which appeared in the April INDIA RUBBER WORLD

All in all, it was a magnificent company of auditors before whom Mr. Nazro stood fifteen years ago. And, right here, let me note a feature of his selling ability which I do not remember to have seen mentioned in print. As this great sale progressed, prices advanced. The auctioneer did not allow interest to wane. "At the close," wrote a gentleman who was in no way interested in the success or failure of the sale, "there was not a very wide difference between the prices obtained and those which could have been made at private sale."

As this issue of the THE INDIA RUBBER WORLD is a special edition devoted to the boot-and-shoe trade, I deem it appropriate to recognize in this connection some of the representative men connected with that great industry.

Before Mr. Nazro, at this great sale, stood Morris Selz, of Chicago, who to-day disputes the question of supremacy in this trade with A. D. Brown, of St. Louis. Yes, and among the bidders were G. E. P. Dodge, of the "World's Fair City," and H. C. Huiskamp, of Keokuk. Does any reader suppose that an event could occur in 1892 of sufficient trade importance to warrant such a grand rallying as did this auction sale of rubbers in 1877? No intelligent reader does. This gathering held under red-flag auspices was something more than representative; it was a unanimous movement. W. W. Kendall came from Kansas City and J. R. Gregg from Pittsburgh; W. H. Tuttle from Nashville and H. N. Lester from Binghamton.

"Friends, Romans, countrymen, and delegates from New Jersey," began the auctioneer, "lend me your ears! We have only 125 cases of the National Company's men's short boots, F. Something in the expression of the gallant Major E. Bruce Preston of Chicago tells me that he is disposed to regard short boots with favor. Two dollars? Thank you, Major. Mr. Martin, of Martin & Potter, these goods should sell well in Providence. Yes, two twenty-five. Now, Cleveland is in many respects a remarkable city, and if there is one man there who understands values that man is H. B. Childs. I want Mr. Childs to inspect this line or I am willing to abide by the decision of George P. Holmes."

These goods, started at $2, were sold at $2.77½. The lowest figure which any of the National Company's goods brought was 36 cents, for forty cases of ladies im. san., 5th av., M.

The year 1877 was an important one in connection with American politics. The Hayes-Tilden controversy was much in men's minds. The happy faculty which Mr. Nazro possesses of keeping everybody in good humor was illustrated at the sale of which I write, for his allusions to questions and issues of a political nature while being timely and bright never once gave offense. The temptation which an intelligent, bright-witted auctioneer has to say sarcastically humorous things constantly recurs. The gentleman of whom I write is an exceptionally good judge of human nature. One of the ablest men connected with the boot-and-shoe trade said of F. H. Nazro years ago: "He shows extraordinary capacity in his quick discernment of bids and knowledge of bidders." Granted that, among a dozen bidders, an auctioneer can determine which one is determined to secure a certain lot of goods, the danger is that the seller will not be able to utilize the knowledge which he posseses to the best advantage.

C. M. Henderson of Chicago is a man of considerable individuality. He attended this sale and among those who did some bidding against him were G. A. Wolverton of Albany and H. S. Pettengill of Peoria. Now, anything which Mr. Henderson goes for he generally gets, whether it be a line of commodities on the Chicago Board of Trade or seventy-five cases of plow-shoes. From his knowledge of the man, Mr. Nazro might feel certain that the Chicago bidder intended to capture the goods he was bidding on. The problem then presented itself: how to secure from the Albany and Peoria gentlemen the maximum bid of each without having either suspect that, in the judgment of the auctioneer, the Chicago bidder would be "the last man in the game." To be a successful auctioneer a man must not only be something of a mind reader, but he must wear a mask; above all, he must resist the tendency to talk too much.

Such men as Isaac Greensfelder of Chicago, O. J. Lewis of St. Louis, J. P. Magovern of New York, and H. E. Boynton are pretty well qualified to ascertain just how much an auctioneer knows. These gentlemen attended the sale of which I write and because of the impression made upon their minds and pocket books on June 7 and 8, 1877, by F. H. Nazro, they agreed that Boston, in addition to her other attractions, boasted the leading auctioneer of the country.

The New Brunswick Company, the Meyer, the Hayward, the Candee, the Woonsocket, National and Boston furnished the material for this sale. They were known as the Associated Rubber-Shoe Companies. It was a strong combination because—so far as auctions were concerned—an united one. "In union there is strength." In the recent formation of the United States Rubber Company may we not discern signs of an harmonious condition which shall endure longer and be more prosperous than were the famous auction sales of years ago?

[TO BE CONTINUED.]

Many Rubber Boots for Japan.

JAPANESE merchants have sent to this country lately a boot of the pattern worn in the rice swamps of that country with an order for many thousand pairs of rubber boots of the same form. The boot is peculiar and reflects the shape of the foot of the Japanese. Short in length, hardly a No. 6, it has a high instep and a leg at least six inches in its longer diameter. The top of the boot-leg is twelve inches from the heel. The Japanese do not compress their feet, but in the fact that the shape of their feet now differs little from those of the Chinese, it is believed that they once did, and that the law of natural selection is now carrying out its usual bargain, with such counter disturbance as Dame Nature is setting up to restore matters to their original starting point.

An Inquiry for Rubber Scrap.

TO THE EDITOR OF THE INDIA RUBBER WORLD: In your issue of March 15, under the heading "Rubber-Goods Exports from New York," we note a consignment of India-rubber scrap amounting to $4780 consigned to Glasgow. We should indeed feel much indebted to you if you would place us in communication with the shippers of same.

V. CHAUTARD & CHRISTENSEN.

London, March 29, 1892.

[THE figures referred to were furnished by the Collector of Customs at the Port of New York, but it is not possible to obtain there any information regarding exporters or consignees. Dealers in the class of goods mentioned may find it to their interest to correspond with the firm making this inquiry.—EDITOR.]

THE RUBBER-SHOE TRADE OF THE WORLD.

Information Gleaned by United States Consuls.

THE impression will be gained, from a study of the United States Consular Reports on India-rubber, so far as they relate to the trade in rubber footwear, that the demand for this class of goods on a large scale is confined to very few countries; that in some of those countries the demand is met almost wholly by European manufactures; that American rubber shoes generally meet with favor, though little systematic attempt has been made to place and keep them on sale; but that in some other sections, where the consumption of rubber shoes is large, the neglect of American manufacturers to study the needs of the markets has caused their products to be regarded with much prejudice. Some of the Consuls whose reports are quoted from here offer suggestions to our manufacturers with regard to the extension of their foreign trade which may merit consideration. In connection with the notes on the trade in American goods with each of the countries named it would be well to examine the table of exports at the end of this article, giving the official statement of the number and value of rubber shoes shipped to the different countries.

AUSTRIA-HUNGARY.

The India-rubber industry in this country is one of long standing. Thirty-five factories, small and large, are reported by the Consul-General at Vienna, producing the whole range of rubber articles, including boots and shoes. Some of the products are exported, mainly to Germany and Italy, but the sum of imports, for the most part from Germany, is much greater. The United States supplies rubber belting and dental rubber to the extent of about $7000 a year, besides which some American rubber goods may have been imported indirectly. Labor is very cheap and an import duty of $10.35 per 220 pounds is charged, tending to exclude every article of rubber from abroad that is not a specialty. Austrian merchants are conservative and indisposed to become acquainted with the products of foreign countries, and the Consul-General considers the obstacles to the introduction of American rubber goods there as almost insurmountable. No American rubber goods are imported at Trieste, though what have been seen there are well liked. The Commercial Agent at Reichenberg has never seen a pair of rubber boots from America in Austria. Some clumsy rubber shoes, made in England and Germany, have been seen by him, however. The statistics given here are for the whole country:

RUBBER SHOES.	1889.	1890.
Value of exports	$19,502	$ 6,686
Value of imports	22,761	37,113

BELGIUM.

Rubber factories exist in Brussels, Liege and Ghent, but no boots or shoes are produced. The importation of these articles is small. The Consul at Antwerp states that of the rubber goods imported there about 4 per cent. are from America, consisting mainly of boots and shoes. These do not give entire satisfaction on account of being too light and not fashioned to suit the tastes of the people. The Consul at Brussels states that such few American goods as enter that port come through England and are credited to the latter country. In like manner the rubber shoes imported from Russia are entered at the Custom-House as German goods. England, however, principally supplies the trade. The duty on imports of rubber manufactures is 10 per cent. *ad valorem*. The Consul at Ghent suggests that the French language must be used in making overtures for an extension of trade in his district.

DENMARK.

American rubber goods are regarded as "first-class," fully equal to English and far superior to German. The imports are smaller, however, than from the two countries named. The duty on imports of the class to which rubber shoes belong is $9.06 per hundredweight. No rubber shoes are manufactured in this country.

GERMANY.

Rubber shoes are manufactured extensively in Germany, both for home consumption and for export. The Consuls fail to give a list of the concerns, however, farther than to mention "a very important boot-and-shoe manufactory at Mannheim," and the statement that "all classes of rubber goods" are produced at Hamburg, with figures showing that boots and shoes are included. Besides, the Frankfurter Gummi-Waaren Fabrik make tennis-shoes. The demand for rubber shoes seems general throughout the German empire, and local manufacturers have been unable, so far, to supply it, though heavy protective duties have been imposed for their benefit. From Frankfort ᵒ/ᴍ Consul-General Mason writes:

"What is perhaps most surprising is the fact that the greater part of the rubber sandals and overshoes sold in this part of Germany are manufactured in St. Petersburg by the Russian-American Rubber Co., which imports its raw material from South America through an import tariff and sends its products into Germany through another import tariff ($10 per 100 kilos) and yet undersells the Scotch, English and American goods, while it surpasses in quality and elegance the best products of the German manufacturers. In spite of all opposition and two adverse tariffs, the Russian-American Co. is steadily gaining control of the trade in Germany. It has an immense depot at Hamburg and has built up an enormous and rapidly increasing trade. It is believed by dealers here who sell the goods of this company that it must receive from the Russian Government some special encouragement, either as bounty on its exported goods or a remission of the duties on the raw material used in their manufacture, perhaps both. However this may be, the essential fact is that their goods now practically dominate the market in Western Germany to the exclusion of German as well as American and English products of the same class."

A rubber-shoe dealer at Cologne informed the Consul at that point "that the superiority of the Russian shoes consisted in their elegant fit, and not that they lasted any longer than those made in other countries. Formerly American shoes were imported to a limited extent, but their styles did not suit the taste of the Germans."

The Consul at Aix-la-Chapelle reports: "I can find no rubber goods imported from the United States, but was shown ordinary shoes which I was assured were of American make, but upon examination found them stamped 'North British Rubber Co., Edinburgh,' retail price, say $1.10, while others were stamped 'American India-Rubber Co., St. Petersburg,' price, say $1.35,

both kinds being somewhat heavy and clumsy; finding none of the light, fine makes so common in the United States."

The same report is made from Annaberg: "On a recent occasion a shopkeeper in this city showed me a pair of rubber overshoes which he said were manufactured in America, and the price of them he stated was $1.75. On examining them I found the Russian eagle stamped on the bottom with other hieroglyphics which plainly indicated they were of Russian origin. They were heavy and clumsy, but not quite up to the German standard in this respect. In my opinion American rubber goods would not be popular in this consular district, especially American overshoes, for the reason that they are too light in weight. The Saxon people are accustomed to estimate the value of an article by its size and weight."

Some practical suggestions are made by Consul-General Edwards, at Berlin, as follows:

"A large business could be done by the American manufacturers of rubber shoes in Germany, provided the manufacturers would show proper attention to the tastes and long-established customs of the German people. The wall which constitutes the grand difficulty in the way of almost every American manufacturer in his efforts to reach this market is prejudice. American manufacturers almost invariably try to persuade every foreign purchaser that each article of wearing apparel, from the waterproof clothing to the overshoe, should have a certain amount of style about it.

"What is commonly regarded by the American manufacturer as 'style' is with many Germans irreconcilable with usefulness, and it very frequently happens that the foreigners are unjust and unwise enough to regard a certain amount of 'style' or finish in such articles as a stratagem or trick which is resorted to to dispose of inferior wares. The prejudice of the North German in favor of the heavy, clumsy boots and shoes which he buys from Russia is quite as strong as that of the American manufacturer in favor of his light, stylish, well-finished boot and shoe.

"Russia commands and controls this market in rubber boots and shoes simply because the demands of the North German are about the same in this line as the Russian. Attention to the tastes of the North Germans is absolutely indispensable to success in this market—in the shoe trade. American manufacturers pay too much attention to the cut, style and finish of their products, and too little attention to the foreign prejudice which exists in favor of another class of goods.

"If American manufacturers are to secure a fair share of the North German trade in rubber boots and shoes they must try to satisfy not only the tastes of the North Germans but also meet the requirements of the climate of North Germany."

Says the Consul at Nuremberg: "Rubber shoes of American manufacture appear to have been offered here from time to time for sale by retail dealers. They say, however, that they are too light and do not last as long as the heavy ones of the German and English make; besides that, they are more expensive. I think the last reason is the prime factor in preventing their introduction."

Still other reports are, however, to the effect that American rubber shoes have made a good impression in many quarters. From Duseldorf is reported a growing sale for rubber shoes, for both men and women, of French make, on account of their "style" and finish. It is even said that some German makers have had French trade-marks placed upon their shoes in order to facilitate their sale. Differing from all other reports is that of the Consul at Crefeld, who states: "Only rubber shoes are imported from the United States. The amount will not exceed $5000 per annum. The only goods of American manufacture are ladies' and gentlemen's shoes. They are made in better style, and are considered far superior to other goods of the same class manufactured either in England, Germany, or France."

The exports and imports of rubber shoes at Hamburg during 1889 were as follows:

COUNTRIES.	IMPORTS.	EXPORTS.
United States	$ 2,528	$
Great Britain	35,260	261,305
Belgium	838	
Portugal	572	
Russia (Baltic)	29	
France		1,606
Sweden and Norway		51,760
Denmark		1,748
Turkey in Europe		1,252
British East Indies		2,026
Chili		2,597
Other countries	158	3 526
Total	$39,389	$325,820

HOLLAND.

No rubber shoes are made in this country, but such goods are in demand, being imported mainly from Germany. The Consuls find no trace of American goods in the market.

RUSSIA.

Considerable information regarding the rubber industry in this country was given in THE INDIA RUBBER WORLD for February, including the great Russian American India-Rubber Co., which is referred to in this issue of the paper as controlling so largely the rubber-shoe trade in Germany.

SPAIN.

"I have not seen a rubber boot or overshoe in Andalusia," writes Consul Turner. In 1890 the Consul at Barcelona wrote: "Two years ago there were no importations of rubber from the United States; but about fifteen months ago an invoice of waterproof clothing and of rubber boots and shoes was sent to Barcelona from Boston, the city in which Thomas C. Wales in 1825 conceived the idea of converting the Pará overshoe as made by the Indians in Brazil into a rubber shoe of serviceable size and graceful shape, and in which rubber shoes are now made that at present are unrivaled in Spanish markets. During the last year $5000 worth of these shoes have been sold in this province, and the demand for them is steadily increasing."

FRANCE.

No mention is made by the Consuls of the manufacture of rubber shoes in France, though it is known that some are produced in that country. Regarding the use of such goods the Consul at Nantes says: "Rubber shoes without heels are worn to a great extent. Shoes without heels are simply a covering for the toe and instep, running back to the heel of the boot, with an elastic band passing around the heel to keep them in place. This system leaves the heel of the under boot free, and the wearer is very much less likely to slip and slide than with the ordinary full shoe; at least such is the not unreasonable pretension of the manufacturers. These shoes are sold at from 80 cents to $1 per pair." On the other hand the Consul at Marseilles writes: "Rubber clothing, boots, and shoes are in slight demand in the south of France. Those I found in retail stores bore the mark of a Paris house, but I am informed that these articles are made in England." From Bordeaux the report is: "Although the winter season in the southwestern portion of France is extremely damp and rainy, rubber clothing, mackintoshes, etc., are rarely seen; boots and overshoes of the

same material never, except, perhaps, in shop windows." The half-dozen rubber-goods dealers in Rouen "purchase boots and shoes of India-rubber in Boston, as the American manufacture of these goods is superior to any other." Beyond this statement, all the information given would indicate that the rubber-shoe trade in France is controlled chiefly by England. Taking all classes of rubber goods together "it appears that England furnishes twenty times more to France than does the United States." Some rubber shoes are exported from France, as shown by the Custom-House statistics at Havre. The figures relate to weight in pounds:

EXPORTS TO—	1886.	1887.	1888.	1889.	1890.*
Sweden	94		462		
England	2,272	864	264	1,003	304
China	253				
Guatemala	59				
Brazil	88	825	1,320	612	284
Argentina	488		550	114	4,519
Chili	2,171	132	308	6,534	
St. Thomas	154				310
Portugal			952		988
Turkey			1,784		
Egypt			5,566		
Australia			1,560		
United States			48		
French Guiana			1,032		
Philippines				748	
Mexico				308	3,729
Venezuela				158	
Spain					84
Japan					506
Total	5,579	1,821	13,846	9,477	10,726

* First nine months in the year.

GREAT BRITAIN.

The Liverpool Rubber Co. (Limited) have an output of boots and shoes estimated in December last at 3000 to 4000 pairs per day, besides mechanical goods of various kinds. The products of the company are exported to all parts of the world. Consul Sherman reports that the only rubber articles of American manufacture sold in his district are shoes, which compare favorably with the local product, being preferred by some on account of their superior finish and durability, and "being slightly cheaper."

The district embracing Edinburgh produces about $2,500,000 worth of rubber goods yearly, the leading item being shoes. They are exported to Australia, New Zealand, India and South America, but not to Russia or the United States. The North-British Rubber Co., Limited, located in Edinburgh, is the largest shoe-manufacturing concern in the Kingdom, having a capital of $1,750,000. Consul Bruce is informed "that France and Germany compete for some of the trade in Great Britain, and sell about $500,000 worth of rubber shoes annually. Three or four years ago the competition was strong. Now there is an understanding between the manufacturers in Great Britain and on the continent so that cutting in prices has generally stopped. The manufacturers of the three nations meet yearly and arrange the prices satisfactorily among themselves." The Consul is of the opinion that an opening exists in the larger British towns for the sale of first-class American rubber shoes, on account of their being "more graceful and better made" than the local manufactures.

No rubber shoes are made in the Manchester district. J. Mandelberg & Co., Limited, large manufacturers of other rubber-goods in Manchester, are reported as saying: "Our experience of American rubber-goods extends only to shoes, which we consider compare favorably with those from other countries."

At Dunfermline "there seems a preference for American made rubber boots and shoes, especially for ladies' wear, which are obtained from a Boston agency in Glasgow."

Although nearly every other description of rubber-goods is produced in the consular district of Glasgow, it is stated that no rubber shoes are made there. The importations from the United States are small, American-made shoes being considered too light in weight.

INDIA.

No rubber shoes are worn in Calcutta, and very little clothing except of the poorest quality, and the Consul-General there does not encourage American manufacturers to seek trade in that direction.

NEW SOUTH WALES.

The Custom-House exhibit of rubber-goods imports does not include rubber shoes, which are embraced under the general heading of "boots and shoes." The Consul at Sydney says that the mild climate renders rubber shoes for the greater part undesirable, though a small demand for rubber boots and leggings exists in seaport towns and mining districts. The manager of the Sydney branch of a New York firm was obliged in 1889 to return several consignments to New York, including rubber shoes, because the prices asked were higher than those for English goods. He attributed the low prices to the large stocks in hand of the manufactures of the North British India-Rubber Co., who had almost a monopoly of the trade. A Sydney firm claiming to be the largest importers of American rubber goods said: "There is a prejudice against American rubber goods * * * The American rubber boots and shoes (unless they are the very best grades) do not compare with British goods. We may mention that there is the same feeling against French and German goods, all of which perish much earlier than English goods." Nevertheless, American rubber goods have carried off prizes at the international exhibitions in Australia whenever brought into competition with European manufactures. The American manufacturer, it is stated, is at a disadvantage with respect to cost of freights, opportunities for prompt shipment and banking facilities in Australia. The Consul at Newcastle reports an extensive use of rubber shoes, though he was unable to find in the stores any from American factories.

DOMINION OF CANADA.

The Consul at Gaspé Basin, Quebec, writes: "American rubber goods are regarded here far superior to Canadian, and sell for one-third more. Rubber boots and shoes are the main kinds of rubber goods used here, and they are used to a large extent."

The Consul at Halifax writes: "Dealers inform me that American rubber boots are superior to those of Canadian manufacture, and are more salable. The larger part used, but not all, is from the United States. American rubber shoes for ladies' wear are also of finer and better quality than the Canadian, and sell for a little more. But of the ordinary quality of shoes the larger part is manufactured in Canada."

The Consul at Stratford writes: "American rubber boots and shoes are considered the best in the market."

The Consul at Windsor, N. S., writes: "All of the [rubber] boots sold here and the better quality of shoes are made in the United States, and the higher prices are willingly paid by many customers, not only on account of the superior quality and consequent increased durability, but because they are of better shape and finish—more stylish than those of Canadian make."

The Consul at Windsor, Ont., writes: "Nearly all the rubber goods sold or used in this district are imported from the United States, except boots and shoes. The latter articles are now being

manufactured in Montreal and vicinity, and are crowding out the United States productions.

MEXICO.

The importation of 3146 pairs of rubber boots and shoes into the city of Mexico during 1888 is reported by the Consul-General there, under an import duty of 48 cents per kilogram. They were regarded as equal in quality to the goods imported from any other country, and the opinion is expressed that the imports might be largely increased if manufacturers in the United States would send out competent agents, familiar with the language and business customs of the Mexican people. The Consul at San Benito reports: "Rubber boots are never used, and rubber overshoes are seldom seen, though they might find sale if once introduced." Rubber boots and shoes from the United States are imported at Tuxpan, where they are considered equal to if not better than similar goods from other countries.

CENTRAL AMERICA.

COSTA RICA.

The importation of rubber shoes is very small, from all sources. The duty in 1890 was 65 cents per kilogram.

NICARAGUA.

American hose and overshoes are thought to excel competing goods imported from Europe, but the extent of imports is small. Consul Newell thinks that "India-rubber boots would find a good market in Nicaragua and are much preferred to the rubber overshoes that are sent here." Drawbacks to the extension of American trade are the absence of long credits, such as European merchants grant; the heavier freight charges from the United States, and the neglect of our manufacturers to pack goods in a convenient shape for carriage by mules.

ECUADOR.

Of the four houses in Guayaquil handling rubber goods, one sells American products exclusively, claiming that they are superior to European goods. The latter, however, average about 10 per cent. cheaper. The importation of rubber shoes in 1890 was 135 dozen pairs, mostly from the United States, under a tariff of 50 cents per kilogram, with 10 to 20 per cent. additional.

BRAZIL.

As far as the Bahia district is concerned, writes Consul David N. Burke: "The best thing for rubber manufacturers to do is to let this place entirely alone and seek to enter some field where rubber goods are wanted by the people. The statistics show there is no demand for this class of goods. The climate is against the wearing of such goods, excepting as stated – the lightest kind of rain-coats—and these are chiefly confined to foreigners in their use."

COLOMBIA.

The imports of rubber goods at Colon, from $5000 to $7000 a year, are mainly from the United States, and are admitted free of duty. The Consul at Barranquilla gives a detailed statement of imports, showing invoices of rubber shoes from New York, as well as Liverpool and Havre.

EXPORTS FROM THE UNITED STATES.

According to the record kept by the United States Treasury Department the number and value of rubber boots and shoes exported during the fiscal year ending June 30, 1891, were as follows:

	Pairs.	Value.		Pairs.	Value.
Argentina	768	$ 300	Hawaii	701	$1,587
Belgium	5,302	3,247	Hayti	510	376
Brazil	266	440	Japan	1,592	1,413
Central America	2,128	1,801	Mexico	1,280	1,003
Chili	84	29	Netherlands	2,250	1,208
China	50	128	Dutch Colonies,	82	46
Colombia	2,549	1,108	Peru	2	0
Denmark	7,639	2,912	Portugal and colonies	633	933
Ecuador	626	540	Russia in Asia	150	355
France	6,898	3,641	Santo Domingo	84	47
French colonies	410	1,104	Cuba	634	1,064
Germany	2,360	1,203	Spanish colonies	70	88
Great Britain	93,758	51,677	Switzerland	1,386	630
British North America	36,123	53,765	Turkey	306	289
British Australia	5,380	9,409	Venezuela	635	371
British possessions, other	982	975	Total	175,627	$141,676

Later figures would indicate a steady growth in the rate of exports of rubber shoes. For the eight months following the year above mentioned the value of such exports was $145,677, against only $105,918 for the corresponding eight months in the year ending June 30, 1891.

Tan-Colored Rubber Footwear—Why Not?

[FROM THE BOSTON "HERALD."]

A COLD, unfeeling wind whirled down Tremont street yesterday and made itself generally disagreeable. A blue-faced young man, who had pawned his overcoat to buy his best girl's Christmas present and was sorry he did it, stood in a sheltering doorway, wrapped only in thoughts of the infinite variety of feminine footwear.

The wind revealed to the young man many illustrations. There were neat storm-slippers, gaiters, black worsted leggings, buttonless unprotected boots and hideous arctics; but worst of all, there were tan shoes, with black rubbers over them.

Why the combination of black rubbers and tan shoes should be so excruciating is something mysterious, but true. The only kind of rubber to be worn with a tan shoe is a tan-colored rubber. Strangely, in spite of the increasing popularity of russet leather shoes, the tan-colored rubber—so chic, so appropriate—has not been evolved.

There are shoe stores in Boston where a most varied and bewildering assortment of ladies' footwear is displayed, but none of them have any tan rubbers—only common, black ones. The storekeepers themselves have never heard of such a thing, but offer to have rubbers made with yellow cloth tops, if ordered.

The rubber-men are also unprepared to meet the prospective demand for tan rubbers. They say that they can make rubber in any shape and in any color. Some say that tan rubbers are perfectly practical, but others shake their heads and say that the antimony that would be used as coloring matter would make them less durable for the street than black rubbers.

But if the tan shoes have come to stay the tan rubbers are certain to follow them. They will harmonize not only with the shoes, but with the mud of the street when it is dried on.

IT is stated that an improved type of scissors has been patented by Mr. A. Hodgson, of No. 11 Westbourne place, Bradford, England. The novel feature of the scissors is the arrangement of India-rubber round the bows, which, therefore, do not require grinding and polishing during the process of manufacture, this being an item of great expense. The scissors are said to be of special importance to dressmakers, tailors and barbers as they are very convenient to handle, and afford a firm grip.

THE LATE JARED H. CANFIELD.

THE late Jared H. Canfield, who founded the Canfield Rubber Co., was born at East Haddam, Conn., on May 19, 1811. His father was a ship-captain and lost his life at sea in the memorable gale of 1815. Young Canfield received the ordinary education obtained by New England boys, in a district school, and was early apprenticed to and learned the trade of shoe-making. He was employed in this occupation at Meriden and at New Haven, Conn. In early life he became acquainted with Charles Goodyear and about the year 1840 he became connected with the Goodyear Metallic Rubber-Shoe Co., at Naugatuck, Conn., after which his life continued to be devoted to the manufacture of rubber goods.

At the request of Charles Goodyear, he went to France and assisted him in working his patents in that country. From that time on he was intimately acquainted with Goodyear, and aided him in many of his experiments. In 1850 he was employed to take charge of the large India-rubber works of the "Compagnie National" in Paris, France. At the end of fifteen years he returned to America with a competence, intending to settle in Meriden, Conn., the old home of Mrs. Canfield, and to retire entirely from active business. He became dissatisfied with this inactive life and entered into several business enterprises which proved in the end very unfortunate and swept away his entire fortune. He immediately sought employment again, although then over sixty years of age, at the rubber business. He was employed at New Brunswick, N. J., by the Meyer Rubber Co., and subsequently had charge of the rubber factory at Middletown, Conn. This last venture failed in 1875 on account of the disagreement of the partners, leaving Mr. Canfield penniless. He then, while nearly seventy years of age, turned his attention to the manufacture of dress-shields.

After studying the Beames and Woods patents, to see if he could produce a dress-shield under those patents, he began work in connection with his son, Isaac A. Canfield, and after some months of experimenting they succeeded in inventing a machine which was patented March 29, 1881, by means of which they were enabled to produce the seamless stockinet dress-shield as desired. In 1880 a company was formed under the name of I. A. Canfield & Co. to manufacture dress-shields. Jared H. Canfield was to have charge of the business. The capital, about $4000, was all contributed by Mrs. Jared H. Canfield from her entire private property, and by Mrs. Wilbur F. Parker, daughter of Jared H. Canfield, from money received from her deceased husband's estate. The business began to develop in 1881, when there was sold of these goods about $35,000 worth. In 1882 the business developed rapidly. In 1881 Mrs. Canfield died, and the business was by a written consent of all parties in interest left in the management of Jared H. Canfield during his life. On June 26, 1883, Mr. Jared H. Canfield died suddenly. Upon his death a joint-stock corporation was formed under the name of The I. A. Canfield Co., composed of Mr. and Mrs. Canfield's three children, I. A. Canfield, H. O. Canfield, and Mrs. L. C. Hicks, and Ratcliffe Hicks, who had married Mrs. Wilbur F. Parker.

The business continued to increase. The sales in 1882 amounted to about $60,000. In 1883 they amounted to $112,000. In the meantime patents were taken out in all the principal countries of Europe. A contract had been entered into with A. Hutchinson & Co., one of the largest rubber concerns in Europe, to manufacture the goods on royalty. Machinery had been sent over from this country and the seamless stockinet dress-shields were then manufactured under that contract at Mannheim, Germany, and Montargis, France.

At the time of Mr. Canfield's death he was one of the most skilful manufacturers of rubber goods in this country or Europe and was so acknowledged by the trade.

The rapid increase of the business at home and abroad led to an application to the Legislature of Connecticut for the incorporation of The Canfield Rubber Co., under a special charter which was granted at its January session, in 1883, preserving all the rights and suits of The I. A. Canfield Co. The charter was accepted by the stockholders of the I. A. Canfield Co. in June, 1883. On January 12, 1884, the Canfield Rubber Co. purchased the patents of Frederick Wittram, dated February 1, 1876. The Canfield Rubber Co. started with a capital of $10,000, which has been increased from time to time until on January 1, 1892, it amounted to $250,000, with a surplus of as much more. The concern is now owned and managed by Mr. Canfield's son-in law, Ratcliffe Hicks, while his son, Henry O. Canfield, owns the well-known Canfield Rubber-Mold Works, at Bridgeport, Conn.

THE American Rubber Co., of Boston, have presented to Peter Denzer a No. 54 rubber shoe, twenty-seven inches long.

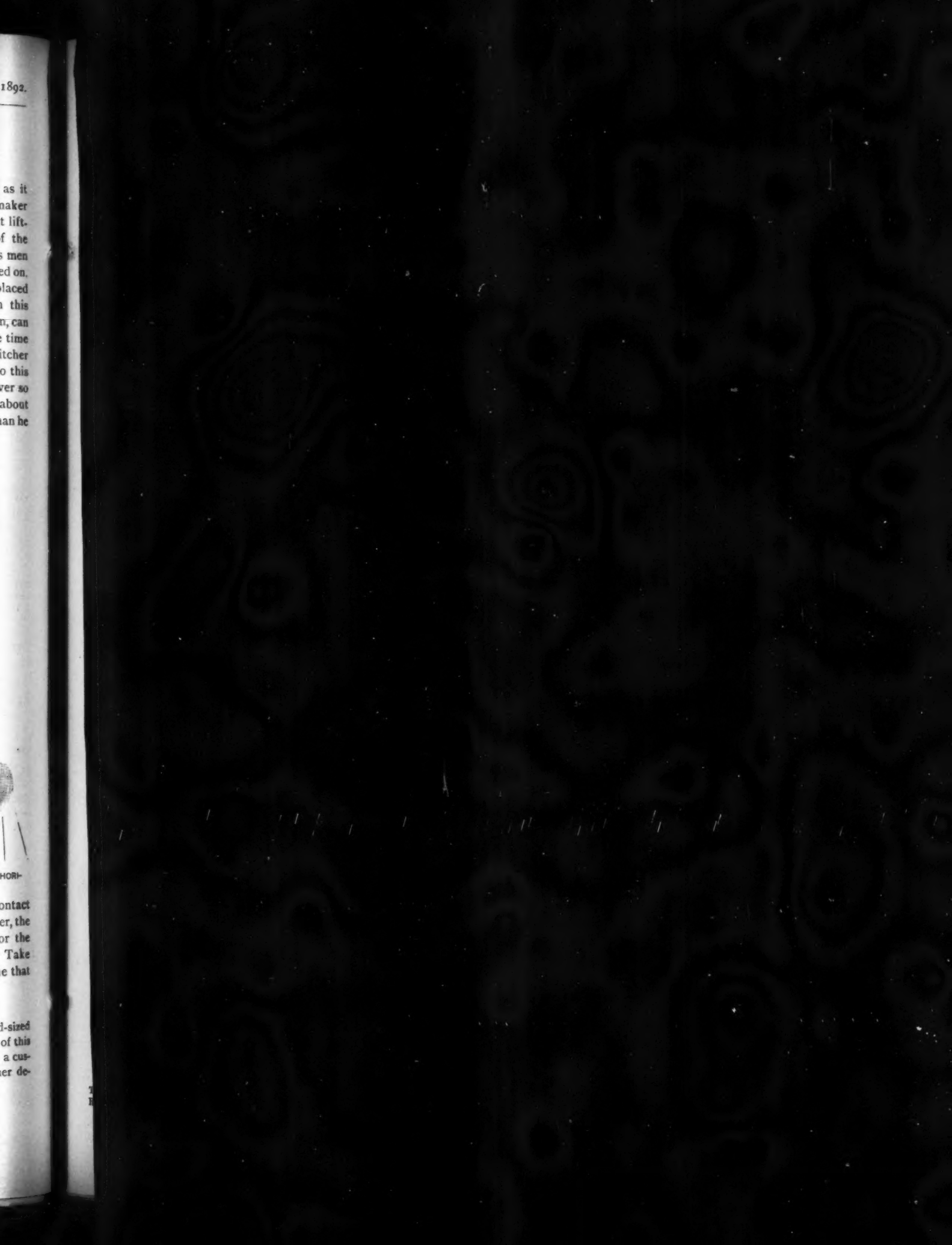
RECENT RUBBER-SHOE MACHINERY.

THE leather shoe which to-day is made by machinery only a few years back was made by hand. The rubber shoe is to-day made by hand; whether it will a few years hence be turned out by some process that will parallel those used in the manufacture of leather footwear is an open question. It is certain, however, that from time to time there will be added processes and machines that will lessen labor and increase production. It is also to be expected that with the progress of invention in these times there will come a better and more even product than has been furnished in the past. No one who has ever manufactured rubber boots or shoes will question the assertion that large losses are sustained yearly through the ever-varying capacity of workmen to produce good goods, and this, too, in spite of the most careful systems of inspection. Anything therefore that helps the workman to be accurate, and that allows him to do his work with greater facility is to be welcomed. To-day rubber boots are made much as they were when the first rubber mills were established. The boot-room in the old Hayward Rubber Co.'s mill at Colchester does not differ radically from the best-equipped boot-room in existence to-day. In comparing the two one would be struck with the fact that inventive genius had apparently been napping since the time of Nathaniel Hayward. To be sure the boots themselves are "up to the times," and have a variety of modern excellencies that were not dreamed of then, but the labor involved in making them is much the same. At last, however, a time has come when several new machines are offered to the rubber boot-and-shoe maker, and are being very favorably looked upon. The illustrations accompanying this article show a new and ingenious device for the boot-room called the "Jack." Figure 1 illustrates the machine alone as it should stand attached to the table where the boot-maker plies his trade, and its first office is to save constant lifting and handling of heavy boot-trees. This part of the boot-maker's labor is very arduous, and only vigorous men can do a good day's work as boot-making is now carried on.

FIG. 1—PARKER'S JACK.

FIG. 2—JACK WITH TREE VERTICAL.

In Figure 2 is shown the Jack with a boot-tree placed upon it in a vertical position. With the tree upon this Jack the workman can rotate the boot in any direction, can have it before him upright or horizontally, and all the time has it so firmly held that the rapid work of roller or stitcher in no way interferes with its stability. In addition to this far better work is produced. A workman may be ever so neat, yet he is a piece-worker and the atmosphere about him is one of constant hurry. If he is a good workman he is proud of the fact that his day's work is done before the rest of the boys are through. If a poor one it is a constant struggle to keep up. All this means a slighting of details. When, therefore, these details involve the neatness of his corner, the freedom from cement specks and bits of dirt he slights, and the unvulcanized boot touching the foreign matter for an instant only picks it up, and the result is a blister or a lump. With the Jack, however, there is no necessity for laying a boot on the table, any position required can be attained simply by rotating or pulling, and the rubber comes in contact with nothing but the stitcher, roller, and the hands of the maker. Speaking of the workman's hands, leads to another point. The less a sweaty palm comes in contact with two rubber surfaces that are to be joined together, the better for the boot. Here then is another plea for the Jack as there is far less of the hand-work required. Take it all in all it looks as if this latest invention were one that all the boot-makers will require.

FIG. 3—JACK WITH TREE HORIZONTAL.

THE New Brunswick Rubber Co. are sending good-sized orders of their Nagasaki slipper to Japan. A peculiarity of this shoe is that it has no heel socket, the Japanese adopting a custom of wearing no leather boot or shoe when the weather demands rubbers.